

Montana Public Service Commission



Travis Kavulla - Vice Chairman
District 1

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Federal Communications Commission
Office of the Secretary

Kris Monteith
Bureau Chief
Wireline Competition Bureau
445 12th St., SW
Washington, D.C. 20554

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Dear Ms. Monteith:


It was my pleasure to submit electronically to you on Sept. 24, 2018 the final combined technical requirements document (TRD) for the North American Numbering Plan Administrator's technical, operational, and system requirements. I wanted to ensure, through this letter, that my conveying of this document was recorded in official correspondence.

This work was conducted pursuant to FCC 18-88, and under my direction and that of Commissioner Paul Kjellander, of Idaho, as the chairmen of the NANC and the Numbering Administration Oversight Working Group, respectively. However, the substance of the work was undertaken by the Contract Oversight Subcommittee (COSC), and its members deserve the credit for their substantial hard work; in particular, Betty Sanders and Philip Linse have my thanks for co-chairing the COSC. Dana Crandall and Karen Riepenkroger also deserve a special thanks for their tireless efforts in compiling this document.

Only minor changes were made by the NANC when, during its September meeting, its members' deliberations yielded suggestions which were acceptable to COSC's leadership. Those were incorporated into the TRD, and the discussion which gave rise to them can be reviewed in the minutes of the NANC's September meeting, which I anticipate will be formally approved at our next meeting in December.

Please let me know should you have any questions, or requests for further work on this topic.

Sincerely,


Travis Kavulla

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COMBINED NANPA/PA TECHNICAL REQUIREMENTS DOCUMENT

Description/Specifications

September 24, 2018

Combined NANPA/PA Technical Requirements Document (TRD)

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Section 1: Introduction

1.1 Purpose

This document defines the North American Numbering Plan (NANP) Administrator's technical, operational, and system requirements, and describes the full functionality and services required of the designated North American Numbering Plan Administrator (NANPA) in fulfilling the contract requirements. The functionality of the NANPA will also include the Pooling Administrator function (*i.e.*, the administration of thousands-block number pooling and p-ANI resources) and references throughout this document to "Numbering Resources"¹ includes thousands-blocks and p-ANIs, as well as all other NANP resources administered by the NANPA. The selected contractor shall, at the Federal Communications Commission's (FCC's) discretion, perform the duties of the NANPA for the term determined by the FCC. The "contractor" in this document refers to the vendor selected to be the NANPA.

This document serves as an umbrella and reference document to other resources, such as industry guidelines (*i.e.*, any guidelines referenced in Section 16), United States Federal Communications Commission (FCC or Commission) orders, technical standards, and technical requirements that support the NANP.

The technical requirements are contained in several documents. Should there be conflicts between or among these documents, the order of precedence is:

1. Code of Federal Regulations (CFR), Title 47, Volume 3, Parts 40-69, Telecommunications (Reference 42);
2. FCC Orders (References 1, 2, 3, 4, 32, 33, 37, 43 and 44);
3. The Statement of Work in the awarded Contract;
4. Any Change Orders that have been approved by the FCC and implemented by the contractor;
5. This document;
6. The relevant industry guidelines for the Numbering Resource being administered;
7. Other related documents listed in Section 16.

This information will then be used to evaluate contractor responses to the administrative and assignment tasks and functions, as well as the system required for NANP Numbering Resource administration.

1.2 Scope

This document describes the technical responsibilities of the contractor selected by the FCC to serve as the NANPA. The primary scope of this document is to define the NANPA's performance within the United States.² The NANPA's role in the United States includes the following functional areas: overall NANP Administration, Central Office (CO) Code Administration, Thousands-Block Pooling Administration, p-ANI administration, Numbering Plan Area (NPA) relief planning, collection and analysis of utilization and forecast data, report generation, and all other related NANP Administration and other Numbering Resource functions.

Each of the Numbering Resources and functions of the NANPA's roles are described further in this document.

¹ See definition of Numbering Resources in Appendix A.

² United States means the United States and its territories.

The contractor shall deploy a system that houses all Numbering Resource-related data, accommodates the actual volume of data, and provides real time access to that data by multiple users. The system also shall have a web interface to facilitate access and data input capabilities, allows for generation of reports, and interfaces with all designated parties.

1.3 Background

The NANP is the basic numbering scheme for the telecommunications networks (*e.g.*, Public Switched Telephone Network (PSTN)) located in Anguilla, Antigua & Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, Sint Maarten, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, Turks & Caicos Islands, and the United States (including Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands and American Samoa).³ The format of the NANP is consistent with International Telecommunication Union (ITU) Recommendation E.164 "The International Public Telecommunication Numbering Plan" and follows a 10-digit telephone number format. Each digit in a telephone number is identified by an alphabetical character in the order ABC-DEF-GHIJ, consisting of a 3-digit NPA (ABC), a 3-digit CO Code (DEF), and a 4-digit Line Number (GHIJ). This is in the format NXX-NXX-XXXX, where: N = digits 2 to 9 and X = digits 0 to 9 (*e.g.*, 613 is the NPA code in the NANP number 613-555-0100).

In 1995, the FCC determined that a neutral non-governmental entity not closely associated with any particular industry segment should serve as the North American Numbering Plan Administrator (NANPA). This was to ensure that NANP resources are used efficiently and to ensure that service providers have access to the Numbering Resources they need to compete in the telecommunications marketplace. In 1997, the FCC selected a contractor to perform that function through a competitive bidding process, and periodic bidding processes have been conducted since then.

In 2000, the FCC determined that thousands-block number pooling would significantly extend the life of the NANP and issued its first Numbering Resource Optimization order (FCC 00-104, Reference 1) establishing a "national" pooling contractor (*i.e.*, the Pooling Administrator or PA). In the United States, thousands-block number pooling involves the allocation of blocks of 1,000 sequential telephone numbers within the same 10,000 number Central Office (CO) Code (CO Code or NXX) to multiple service providers, who serve customers within the same NPA rate center. Thousands-blocks are allocated from a shared industry inventory, and thousands-block pooling improves the utilization of Numbering Resources.

In 2011, the FCC determined that the Routing Number Administrator (RNA) function would be administered by the Pooling Administrator (PA). The RNA is responsible for administering non-dialable pseudo-Automatic Number Identification numbers (p-ANIs) used for routing emergency calls. A p-ANI is a number, consisting of the same number of digits as an Automatic Number Identification (ANI), which is not a North American Numbering Plan telephone directory number and may be used in place of an ANI to convey special meaning to the selective router, public safety answering point (PSAP), and other elements of the 911 system.

In 2018, the FCC issued an order (Reference 44) directing the North American Numbering Council (NANC) to develop a technical requirements document for review by the FCC, containing a single, unified set of functional and interface requirements for a combined NANPA and PA entity. This combined NANPA/PA Technical Requirements Document is the response to that order.

³ 47 CFR §52.5 (d).

The following terminology is employed in this document: the "FCC" refers to the Federal Communications Commission or its authorized agents; an "auditor" is an FCC-designated auditor; "service providers" refers to telecommunications carriers or other assignees that utilize Numbering Resources to provide or establish telecommunications services; "regulatory agencies" refers both to the FCC and the various state public utility commissions (PUCs); the "contractor" refers to the vendor selected to be the NANPA; a "subcontractor" refers to an organization providing services to the contractor; a "user" is a service provider or other applicant accessing the NANP administration system; a "constituent" is the most inclusive term and can include service providers and applicants, service provider consultants, the Number Portability Administration Center (NPAC) vendor, , the LERGTM Routing Guide⁴ vendor, Public Safety Answering Points (PSAPs), 9-1-1 system service providers, 9-1-1 governing authorities and other regulatory agencies, the media and the general public.

1.4 Mission and Attributes

The NANPA's role is to serve as the neutral numbering (including thousands-block pooling and p-ANIs) administrator for the United States and its territories, and to coordinate with other NANP member nations as needed. The NANPA must comply with the statutory requirements for neutrality and meet the FCC's neutrality requirements, set forth in 47 CFR §52.12 and 47 CFR §52.20.

Offerors must demonstrate that they meet the FCC's neutrality requirements through submission of a certificate signed by a Chief Executive Officer or President that explicitly certifies the offeror meets each requirement. The successful offeror will be required to re-certify to its compliance at the time of award. Offerors shall be prepared to provide any other documentation verifying compliance as may be requested by the FCC.

The entity selected to be the NANPA must adhere to all FCC neutrality requirements, orders, and policies throughout the term of the contract. In this regard, to avoid potential disruption of national numbering administration, the successful offeror will be required to apprise the FCC of any proposed changes that may affect its neutrality sufficiently in advance to permit review of the proposed changes and FCC determination as to whether any mitigation is available or necessary to ensure NANPA neutrality. Such mitigation may include, but is not limited to, changes to organizational or ownership structure, investors, and Board of Directors.

The NANPA is the designated independent, neutral entity responsible for assigning and administering NANP Numbering Resources in an efficient, effective, fair, unbiased, and non-discriminatory manner consistent with regulatory directives and industry guidelines, and is required to comply with state regulatory decisions, rules and orders, as applicable, as long as they are not in conflict with FCC decisions, orders, and rules.

The NANPA shall also ensure that Numbering Resources administration in the United States is effective, while using the expertise and innovation of industry to promote number optimization. It also shall support efforts to accommodate current and future numbering needs and shall advise the industry and regulators on significant numbering issues (*e.g.*, potential resource exhaust).

1.5 Objectives

The main objectives of the NANPA include:

- Provide a standardized application of each type of administrative Numbering Resource function and associated guidelines
- Develop and implement a single system to facilitate all activities of the NANPA and the assignment, tracking, and data reporting requirements for all Numbering Resources

⁴ LERGTM Routing Guide is a trademark and the Intellectual Property of Telcordia Technologies, Inc. dba iconectiv®.

- Maintain and plan for an adequate inventory pool of Numbering Resources for the short and long term
- Develop, implement, and maintain mechanized interfaces with the NPAC, service providers and applicants, BIRRDs, FCC (Red Light) and other identified sources
- Develop and maintain interfaces with industry forums (e.g., Industry Numbering Committee (INC), Emergency Services Interconnection Forum (ESIF), Common Interest Group for Routing and Rating (CIGRR), etc.), and regulatory agencies

1.6 Responsibilities

The NANPA shall:

- Perform all day-to-day number resource assignment, and administrative activities, as well as interact with the NPAC vendor, the BIRRDs vendor, the FCC, and other regulatory agencies
- Provide and maintain a system to support all day-to-day and long-term NANPA functions

1.6.1 Management

The NANPA shall implement a planned management approach utilizing effective forecasting and management skills in order to make the industry aware of the availability of Numbering Resources to meet the industry's current and future needs, and to support the NANPA's overall responsibility to promote the continued viability of the NANP Numbering Resources and to meet the industry's current and future needs.

1.6.2 Performance

The NANPA shall be responsible for maintaining the security, reliability, performance, and flexibility of the NANP administration system. Performance instructions may be found in the *FCC Cyber Security Program* (Reference 23), including guidelines and policies referenced therein. The system shall be user-friendly and not impose a burden on users. The system shall protect from unauthorized disclosure sensitive information provided by service providers, applicants and service provider consultants, Numbering Resource assignees and applicants, Public Safety Answering Points (PSAPs), 9-1-1 system providers or the NPAC vendor.

1.7 Certain Obligations Bearing on Responsibility

1.7.1 Interaction with Governmental Entities

The NANPA, shall be responsible for establishing and maintaining effective and business-like relationships with appropriate governmental and regulatory bodies (e.g., FCC and state regulatory agencies) and addressing policy directives from these bodies.

1.7.2 Organizational Capacity

The NANPA shall maintain the necessary administrative and other staff to handle the legal, financial, technical, administrative, operational, industry, and regulatory issues relevant to the management of all Numbering Resources and shall maintain the necessary equipment, facilities, proper billing arrangements, and other assets to manage the Numbering Resources.

1.8 Policy Objectives and Context

The NANPA shall adhere to the following broad policy objectives. The NANPA:

- Shall seek to facilitate entry into the communications marketplace by making numbering resources available on an efficient and timely basis to communications service providers
- Shall not unduly favor or disadvantage any particular industry segment or group of consumers

- Shall not unduly favor one (1) technology over another⁵

At all times the NANPA shall understand and agree that:

- The functions of CO code administration, NPA assignment, relief planning, thousands-block pooling, and p-ANI administration are among some of the duties to be performed, as well as all other Numbering Resources administration
- Administration responsibilities entail collateral responsibilities such as data collection, forecasting, reclamation, data security, and reporting
- Existing obligations and agreements related to national numbering policy and administration in a CO (NXX) code environment shall also be applied in a similar manner when administering pooled (NXX-X) and p-ANI resources, as well as other Numbering Resources (as applicable)

1.9 Environment

1.9.3 Regulatory

The FCC has authority over numbering within the United States. The other NANP member nations exercise similar regulatory jurisdiction for other geographic areas. The FCC has delegated certain specific numbering authority to state regulatory agencies in the United States. All states have been delegated authority over Numbering Plan Area (NPA) Relief. In addition, some states have been given authority to conduct trials of certain number conservation measures. They have also been granted authority to obtain data, reclaim resources, and enforce number allocation standards. In the future, regulatory authorities of diverse kinds may issue rules, requirements or policy directives, which may increase, decrease or otherwise affect the functions to be performed by the NANPA.

State and/or federal regulatory authorities may issue new rules, requirements or policy directives, which may increase, decrease or otherwise affect the functions to be performed by the NANPA. Within ten (10) calendar days of a regulatory directive, the NANPA shall provide to the FCC and the NANC or its designee its interpretation of the change, its impact upon service, the date the new change is proposed to become effective, what steps in current procedures need to change, and when any new forms or procedures will be required.

1.9.4 North American Numbering Council Oversight

The NANC is a Federal Advisory Committee established in 1995 pursuant to the Federal Advisory Committee Act (FACA) as amended, 5 U.S.C. App 2. The purpose of the NANC is to advise the FCC and make recommendations that foster efficient and impartial NANP administration. The NANC advises the FCC on numbering policy and technical issues in areas of responsibility the FCC has entrusted to the NANC, with a focus on examining numbering in the changing, modern world of communications.

The NANC's charter under the FACA provides that, in carrying out its responsibilities, the NANC shall ensure that NANP Administration supports the following policy objectives:

- Facilitating entry into the communications marketplace by making numbering resources available on an efficient, timely basis to communications service providers;
- Not unduly favoring or disfavoring any particular industry segment or group of consumers;
- Not unduly favoring or disfavoring one technology over another;
- Providing consumers with ready access to telecommunications networks; and
- Ensuring that the interests of all NANP member countries are addressed fairly and efficiently, fostering continued integration of the NANP across NANP member countries.

⁵ See 47 CFR §52.9.

The general duties of the NANC are to gather and discuss information necessary to develop recommendations to the FCC related to the objectives stated above. Under the direction of the FCC, the NANC will provide oversight of matters relating to numbering administration, including the development of industry guidelines. To aid the FCC in its oversight responsibilities, the NANC will also prepare periodic and final reports for the FCC. The NANC serves the FCC in an advisory capacity only.

1.95 Industry Activities

The industry develops number administration guidelines for the United States based on industry consensus and regulatory direction. The Industry Numbering Committee (INC), operating under the auspices of the Alliance for Telecommunications Industry Solutions (ATIS), is the industry forum established to develop such guidelines. The mission of the INC is to provide a forum to address and resolve industry-wide technical issues associated with the planning, administration, allocation, assignment and use of numbering resources and related dialing considerations for public telecommunications within the NANP area. INC guidelines incorporate federal regulatory requirements with technical and operational principles. The guidelines also recognize the existence of specific regulations in states where FCC-delegated authority has been granted. Industry guidelines and regulatory directives are subject to change throughout the contractor's Term of Administration as the NANPA. The NANPA shall administer Numbering Resources in accordance with the industry guidelines unless they are in conflict with regulatory directives or the awarded contract, in which case the regulation or contract will apply.

Section 2: General Requirements

This document describes the functional requirements, administrative tasks, responsibilities, and duties of the NANPA. This section describes basic functions to be performed by the NANPA, which includes by reference any functions or obligations of the NANPA and the Pooling Administrator described in related FCC rules, orders, or directives and the related rules, orders, or directives promulgated by states with FCC-delegated authority, including applicable industry guidelines, technical standards, and NANC-related documentation referenced in the rules, orders or directives of the FCC or by states with FCC-delegated authority, and in Section 16 in this document (which is a non-exhaustive reference list of applicable regulatory items, guidelines, and standards).

The Offeror shall describe its commitment, as well as a description of how it will adhere, to these functional requirements.

2.9 High-Level Requirements

The four (4) high-level requirements of the NANPA are indicated below.

2.9.6 Assigning and Administering NANP Resources

In accordance with 47 CFR §52.9, §52.13 (b) and §52.20 (d), the NANPA shall assign and administer NANP Numbering Resources in an efficient, effective, fair, unbiased, and non-discriminatory manner consistent with FCC regulations and industry-developed guidelines.

2.9.7 Accommodating Current and Future Numbering Needs

The NANPA shall participate in industry efforts to accommodate current and future numbering needs at the NPA and NANP level. The NANPA shall advise the regulators and industry relative to numbering issues, potential resource exhaust, and all routing and rating issues that may affect service to users.

In addition to its many day-to-day Numbering Resource assignment and administrative activities, the NANPA shall provide sufficient focus on long-term planning to ensure the continued viability of the NANP. The NANPA shall update its processes, procedures, systems, and forms to reflect regulatory orders, rules, and directives, and ensure its system is flexible so that such updates can be made easily and quickly with minimal need for change orders. The NANPA shall implement a planned approach utilizing effective forecasting and management tools in order to make governmental and business stakeholders aware of the availability of Numbering Resources to meet current and future needs. Critical components of NANP Administration include NPA relief planning and providing systems and tools for managing Numbering Resource administration.

2.9.8 Administrative Resources for Legal, Financial, and Technical Responsibilities

The NANPA shall maintain necessary administrative resources to handle the legal, financial, and technical responsibilities required to manage all Numbering Resources.

2.9.9 Supervision for All Services and Responsibility for Achieving Performance Objectives

The NANPA shall provide management supervision for all of the services it provides, including responsibility for achieving performance objectives. The establishment of these objectives is a collaborative effort among the NANPA, the FCC, state commissions, the NANC, and the INC.

2.10 Relationships

2.10.10 United States

The NANPA shall establish and maintain relationships within the United States with entities such as the FCC, other federal agencies, and state regulatory authorities or other state governing bodies, as appropriate. The NANPA shall cooperate with and actively participate in policy and technical numbering bodies and industry forums, such as the NANC and its subtending groups, the INC and ESIF.

2.10.11 International

The NANPA shall develop and maintain communications with all other NANP member countries to ensure that their numbering needs are met.

The NANPA shall attend U.S. Department of State Study Group A meetings.⁶ In addition, the NANPA shall maintain a working knowledge of ITU Study Group 2 activities for the benefit of the U.S. telecommunications industry. Attendance at international meetings is not covered by the scope of this contract.

2.11 Administration and Management

The NANPA shall manage the NANP Numbering Resources in accordance with the most current applicable rules, orders, directives, and published industry guidelines and technical standards. Occasions may arise where decisions and interpretations are required on issues that have not yet been addressed. The NANPA shall have the knowledge and capability to recognize these instances and refer them to the appropriate body for resolution.

The NANPA shall perform as the steward of the Numbering Resources. In this capacity, the NANPA shall monitor the status of resources in all areas of the NANP and take appropriate action to ensure the timely availability of Numbering Resources.

The contractor selected to fulfill the NANPA function shall ensure that its other contracts and business arrangements, and those of any subcontractor, do not adversely impact the NANPA organization, or resources it establishes and employs to meet these technical requirements.

2.11.12 Requests for Numbering Resources

Applications for Numbering Resources shall be electronically submitted to the NANPA through the newly developed NANP administration system (NAS), or via email, to be available as an alternative submission, if submission through NAS is not technically possible at the time the applicant chooses to submit the application. The NANPA shall use a standard electronic format for application transmissions. All applications received by the NANPA shall, in turn, generate a confirmation back to the submitting applicant.

The NANPA shall review requests for Numbering Resources for accuracy and appropriateness under applicable rules, orders, directives, industry guidelines, and technical standards. The NANPA shall:

- Accept, process, and verify the accuracy of applications for Numbering Resources in accordance with regulatory requirements and industry guidelines
- Review the entire application, identifying all errors and omissions when first submitted
- Contact an applicant as necessary to gain clarification or additional information in order to process the application when first submitted

⁶ 47 CFR §52.13

- Provide information or location of tools and contacts to assist applicants in properly completing applications for new Numbering Resources, modifications or changes to existing resources, and return or disconnect of existing resources

2.11.13 Service Provider and Regulator Support

The NANPA shall serve as the information resource for regulatory bodies and the industry concerning Numbering Resources issues related to NANP Administration (e.g., ITU Recommendation E.164, NANP, NANP Administration, regulatory issues affecting numbering, Numbering Resource assignment guidelines, CO Code and thousands-block administration, p-ANI administration, relief planning and relevant international numbering issues). The NANPA shall offer and provide periodic educational sessions for service providers and state regulators, as well as provide training videos on various topics that may be downloaded in various formats on its web site.

The NANPA shall respond to inquiries about the numbering plan. The NANPA shall provide, upon request, information on how to obtain current documents and forms related to NANP Administration (including application for automated access to its system and all other materials needed to properly request the assignment or disconnect of Numbering Resources, or change of numbering data) by referring to specific NANPA web pages where requesters may download electronic copies or other sources as appropriate (e.g., to the FCC, state commissions, the INC). The NANPA shall provide copies of documents it generates by email, facsimile, or U.S. Mail if the document is not available via the Internet. A list of documents related to NANP Administration is provided in the List of References in Section 16 of this document.

2.11.14 Numbering Resource Optimization

The NANPA shall provide assistance to users of Numbering Resources and suggest alternatives, when possible, that shall optimize Numbering Resource utilization.

The NANPA shall coordinate its Numbering Resource activities with the Canadian Number Administrator (www.cnac.ca) and other NANP member countries' administrators to ensure efficient and effective management of NANP Numbering Resources.

The NANPA shall be knowledgeable regarding Numbering Resource optimization methods (e.g., rate center consolidation, thousands-block number pooling) and the potential impact upon the NANP itself. The NANPA shall remain completely neutral and shall not take a position that favors one Numbering Resource optimization method over another, but it shall, where necessary or desirable, provide its views to the FCC.

The NANPA shall not take independent action with respect to adoption of optimization methods that are not within existing guidelines or regulatory directives. However, the NANPA shall recognize optimization opportunities and bring this information to the attention of the appropriate body for consideration. The NANPA shall remain cognizant of its obligation to remain neutral.

2.12 Cost Allocation

The Billing and Collection Agent shall determine the final allocation methodology for sharing costs between NANP countries in accordance with the Billing and Collection Agent Requirements Document, or appropriate regulatory documentation. Should cost allocation disputes arise, the Billing and Collection Agent shall request FCC guidance. In no circumstances shall the NANPA decide on its own the cost methodology or allocation between and among NANP member countries.

2.13 Staffing

The NANPA shall maintain the necessary staffing levels to support industry and regulatory work relevant to the management of all NANP Numbering Resources.

The NANPA shall file an initial staffing report at the start of the contract, which shall include staffing numbers by labor category. Thereafter, the NANPA shall report to the FCC on a monthly basis that there has been no change in staffing or, in the event of a change, the report shall show shortages and overages, and yearly turnover rate.

The NANPA shall maintain necessary administrative resources to handle the legal, financial, and technical responsibilities connected with the management of all Numbering Resources. Because the NANPA shall also interface with the media and the public (see Section 2.14.1), the NANPA shall retain personnel that can create and maintain a publicly available web site for this purpose, and retain personnel with public relations skills (*e.g.*, the ability to explain complex numbering administration issues to the media and the public).

The NANPA shall maintain the necessary equipment (*e.g.*, inventory systems, facilities, and proper billing arrangements associated with day-to-day management of Numbering Resources) to support this staff.

The staff shall be trained or have equivalent experience in the areas of customer service and information technology, including, but not limited to:

- Email, web-based software applications and navigation tools, and Internet browsers
- Telephone and call tracking systems and tools
- Problem and change tracking systems and tools
- Ongoing training
- Database retrieval

All employees and subcontractors of the NANPA who have access to a service provider's or an applicant's confidential information shall be U.S.-based and shall execute a non-disclosure agreement that remains in effect following the termination of employment.

Subcontractors may be used by the NANPA to perform work, but responsibility for matters contracted remains with the NANPA, which shall exercise appropriate surveillance of subcontractors to ensure effective management of its responsibilities under this contract.

2.5.15 Availability

Staff shall be available a minimum of five (5) days a week, as defined in Section 2.5 of this document. The NANPA is required to obtain prior approval from the FCC or its designee to any exception to this.

2.5.16 Core Hours

Core business hours for the NANPA shall fall between 8:00 am and 5:00 pm Monday through Friday local time, excluding recognized holidays. However, if circumstances warrant, the NANPA shall be available at other times to meet the needs of the industry.

2.5.17 Physical Location

The physical location of the NANPA facility(s) is at the discretion of the contractor but shall be within the continental United States. The NANPA shall notify clients and the public, by appropriate means, prior to any facility relocation or telephone number change.

If the facility in which the NANPA facility(s) is housed serves other purposes, space allocated to shall:

- Be dedicated entirely for NANPA use
- Be a distinguishable area, separate from other parts of the facility by use of secure access points
- Be contiguous space so that all NANPA personnel are physically located within the same secure area
- Provide sufficient backup power to maintain operation through electrical outages of at least eight (8) hours
- Include square footage and work space layouts for each NANPA staff member

2.5.4 Travel

NANPA staff shall travel, when necessary, to meet the requirements of the NANPA, the industry and regulators (*e.g.*, to NANC meetings, INC and ESIF meetings, CIGRR meetings, NPA relief planning or NPA jeopardy meetings, pooling administration education meetings, or other meetings as otherwise necessary to comply with FCC requirements). The NANPA shall maintain staff that is readily available to perform such necessary travel.

2.5.5 Conflicts

Staff members of the NANPA may not represent the interests of the parent company contracted as the NANPA in any respect. See FCC 00-104, paragraph 154 (Reference 1) and the conflicts and neutrality provisions in the awarded contract.

Conversely, neither representatives of the NANPA's parent company nor any divisions or departments thereof that are not direct, 100% dedicated employees of the NANPA may represent the interests of the NANPA.

2.5.6 Subcontractors

Subcontractors may be used to perform work under the awarded contract. Subcontracting with small businesses will be in accordance with *Federal Acquisition Regulation (FAR) Section 52.219-9, Small Business Subcontracting Plan* (Reference 46).

2.5.6.1 Subcontractor Responsibilities of the NANPA

The NANPA shall provide the following information to the FCC Contracting Officer concerning each prospective subcontractor within five (5) business days of the date of official selection or within 30 calendar days of hiring any subcontractor:

- Complete name of the subcontractor
- Complete address of the subcontractor
- Type of work the subcontractor will be performing
- Percentage of the work that the subcontractor will be providing
- Evidence of the work the subcontractor will be providing
- A written statement, signed by each subcontractor, which clearly verifies that the subcontractor is committed to render the services required by the contract
- Evidence, as set out in relevant sections of the Request for Proposal (RFP), that the subcontractor meets all applicable neutrality requirements

- Written proof that the subcontractor has executed a non-disclosure agreement

2.5.6.2 Substitution of Subcontractors

The substitution of one (1) subcontractor for another may be made only with the written consent of the FCC.

2.6 Telecommunications Requirements

The NANPA shall have voice and data capabilities in order to communicate with all clients and the public concerning NANP Administration. Each NANPA staff member who has responsibilities for interfacing with clients shall have a direct dial number that allows direct telephone access to the staff member and the ability to leave a voice message for the staff member if he or she is unavailable.

The NANPA shall maintain read/write access to routing and rating databases.⁷ This can be accomplished through a graphical user interface (GUI) and a mechanized interface. The NANPA shall also have access to the information contained in the LERGTM Routing Guide⁸ or an equivalent.

The NANPA shall maintain a direct and mechanized interface to the Number Portability Administration Center (NPAC) to transmit and access data that the NANPA needs to perform its responsibilities. The data shall be obtained from the NPAC administrator per the details defined by the North American Portability Management, Limited Liability Corporation (NAPM LLC) that oversees the vendor of the local number portability systems and administration or as otherwise provided by FCC requirements.

2.7 Hours and Daily Operations

The NANPA shall be available a minimum of five (5) business days per week (*i.e.*, Monday through Friday), eight hours per day during the business hours of its clients. However, since the NANP service area covers multiple time zones, the NANPA shall provide a mechanism (*e.g.*, voicemail, e-mail, facsimile) to be accessible on a 24-hour basis in order to meet the needs of all of its clients. Contact information shall be readily available on the NANPA web sites (www.nationalnanpa.com and www.nanpa.com).

The NANPA is required to give a 24-hour notice to the Industry on any exception to the above.

The NANPA shall maintain a log of all client contacts for review by the Auditor and other parties as designated by the FCC.

2.7.18 Inquiry Response

The NANPA shall respond within one (1) business day (to be defined in the time zone where the inquiry was originated) to general inquiries or questions, including those made outside normal business hours, whether made by email, voicemails, or any other method. All emails and voicemails, whether received or responded to outside the normal business hours will be subject to a performance metric and process to be approved by the FCC or its designee. All exceptions shall be noted and brought to the attention of NANPA management.

⁷ The Business Integrated Routing and Rating Database System, BIRDS, is an iconectiv® system that the industry uses to provide input access to the LERGTM Routing Guide which contains the routing and rating information for assigned CO Codes and thousands-blocks.

⁸ Common Language®, Telcordia® and iconectiv® are registered trademarks and CLLITM, and LERGTM Routing Guide are trademarks and the Intellectual Property of Telcordia Technologies, Inc. dba iconectiv®.

The NANPA shall monitor and report on its customer response rates. This report shall be furnished to the FCC upon request and used to review the NANPA's customer service activities per the annual performance review process.⁹

2.7.2 Requests for Information and Referrals

The NANPA shall, upon request, provide information and answer questions regarding NANPA and numbering administration processes, procedures, interfaces, and services within one (1) business day. The NANPA shall, upon request, provide new entrants and all other service providers or applicants with assistance in understanding how to implement the procedures and processes used by applicants to obtain and maintain Numbering Resources, report utilization and all other obligations required to be conducted by Numbering Resource assignees.

In addition, the NANPA shall provide, within one (1) business day of receipt of a request, information on how to obtain documents related Numbering Resource administration, including industry guidelines, by either referring the requestor to web sites where the information is available or by providing electronic copies of the information via e-mail to the requestor.

2.7.3 Emergency Notifications

In emergencies, the NANPA shall be called upon to provide industry notification outside of the accepted timeframes defined in industry guidelines. These notifications shall be issued as appropriate and necessary depending on the circumstances.

2.7.4 Holidays

The NANPA shall observe the following holidays: New Year's Day, Memorial Day, US Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving¹⁰, and Christmas Day. NANPA shall be open for business on all other days that are neither a Saturday nor a Sunday. In all but the most exigent circumstances, emergency closures must first be discussed with the FCC's Contracting Officer Representative (COR).

On an annual basis, the NANPA shall post a list of the holidays observed and the calendar dates of those holidays on the NANPA web site.

2.7.5 Contact

The NANPA shall provide mechanisms (e.g., internet, voicemail, email, facsimile), to be accessible on a 24-hour basis.

The NANPA shall have the capability of transmitting and receiving email messages with and without attached files. The NANPA shall provide "firewall" protective screening of all incoming email messages and attachments based on a security profile established by the NANPA and approved by the FCC. The NANPA shall additionally provide virus protection software on all devices that receive/send email. The NANPA shall maintain the most recently updated version of virus software as defined by the software provider. Any upgrades/changes that would cause incompatibility with the general industry will be communicated to the industry no less than 180 days prior to implementation.

⁹ See 47 CFR §52.11 and §52.12.

¹⁰ Not open for business, but the Help Desk shall be open and this shall be considered a business day for day counts on processing.

2.8 Modification of Guidelines

The NANPA shall participate in the development and modification of INC guidelines and procedures, which may or may not affect the performance of the NANPA functions. These changes may come from regulatory directives and/or industry-initiated modifications to guidelines. In addition, new guidelines may be developed as appropriate to comply with regulatory directives. The NANPA shall implement any changes determined to be consistent with regulatory directives.

The NANPA shall:

- Provide, in real time, technical guidance to ensure processes and procedures are effective in meeting the goals of the change
- Provide issues and contributions, and be prepared to discuss at INC meetings how the proposed change promotes numbering policy and/or benefits the NANP and how the change will affect the NANPA's duties, obligations, and accountability
- Assess and share in real time (*i.e.*, during discussion) the cost implications and administrative impact of the change upon the NANPA's duties and responsibilities in sufficient detail as needed by the INC
- Provide contributions, describing how the change benefits the NANP and how the change shall affect the NANPA's duties, obligations or accountability

Within seven (7) business days of a change, the NANPA shall provide its interpretation of the change, its impact upon service, the date the new change is proposed to become effective, what steps in current procedures need to change and when any new forms or procedures will be required. The NANPA shall provide this information to the FCC and the NANC or its designee. When the INC places any changes to its guidelines in initial closure, the NANPA shall submit an assessment (*i.e.*, a Change Order) regarding the impact of scope of work, time and costs to the INC, the NANC and the FCC within 30 days.

The NANPA shall post changes in procedures on its web site(s) prior to the change taking effect, and shall notify the industry of such posting.

The NANC shall be consulted at the FCC's discretion regarding the suggested implementation date of such changes to determine the likely impact on service provider or other assignee processes and systems (*i.e.*, whether it would be unduly burdensome or would unfairly disadvantage any service provider or group of service providers per the NANPA's obligations and NANP administrative principles).

Specifically, the NANPA shall:

- Notify all interested parties when INC guidelines have changed and provide a short description of the changes.
- Interpret guideline changes and impact upon processes.
- Identify the implementation date or effective date of such changes.
- Provide notification of new forms or tools that may be required.
- Identify a Single Point of Contact (SPOC) within the NANPA's staff to answer questions.

2.9 Dispute Resolution

The NANPA shall resolve disputes and participate in dispute resolution as necessary. These disputes could arise from the performance of NANPA activities, from industry forum activities, or from conflicting government or regulatory policy directives. The extent of involvement of the NANPA in the resolution of disputes shall depend on the nature and origin of the dispute. The Dispute Resolution process, established by the NANC, shall be followed for determination of the controversy.

The NANPA shall assign Numbering Resources based on regulatory directives and industry guidelines. A disagreement may arise when the NANPA is assigning or denying the assignment of a resource, and the NANPA shall be required, based on the relevant regulatory directives, assignment guidelines, and the NANC Dispute Resolution process, to address and, if possible, resolve the disagreement. In addition, disputes may arise between regulatory authorities of NANP member countries and the NANPA may be required to participate in the resolution of the issue between the countries involved.

The NANPA shall interpret and apply relevant guidelines, directives, and Orders, including those listed in the *Index to the Binder of Decisional Principles* (Appendix C), to resolve a disagreement when assigning or denying the assignment of a Numbering Resource. The NANPA shall, in all cases, follow FCC rules and the relevant guidelines that are in effect at the time that the dispute arises.

Disputes may also arise within industry numbering activities. When this occurs, the NANPA may be requested to participate in dispute resolution by providing guidance and/or historical data. The NANPA shall abide by the NANC Dispute Resolution process. The NANPA shall provide any information it has relative to the dispute to the appropriate group responsible for resolving the dispute. The NANPA shall investigate the problem and report back within ten (10) business days from the date of the complaint, to the FCC, the NANC, and to the telecommunications industry participant on the results of such investigation and any corrective action taken or recommended to be taken.

For all disputes, concerns, complaints, and issues raised by clients, oral or written, the NANPA shall prepare a document that contains:

- Description of the dispute, concern, complaint, or issue (recorded within one (1) business day)
- Plan of action (recorded within one (1) business day)
- The resolution and reasoning (recorded within one (1) business day of resolution)
- Number of business days passing before referred to appropriate state or federal regulators
- Number of business days passing before resolution accepted by complainant

The NANPA, in coordination with the FCC, shall take any necessary corrective action within 30 calendar days of the complaint.

The NANPA shall be responsible for expenses that are incurred in achieving compliance with any law, regulation, audit or contract requirements.

2.10 Data Security

Because of the proprietary and/or sensitive nature of some information that may be sent to the NANPA proper security measures shall be taken. The NANPA shall be responsible for maintaining the security, reliability, performance and flexibility of the NANP administration system. The system shall protect the sensitive information provided by service providers, Numbering Resource assignees or applicants, or any other source of proprietary, confidential, or private information.

The NANPA shall protect any service provider-specific or assignee-specific data designated as confidential, unless otherwise directed by that service provider or assignee, or the FCC. These measures shall conform to *FCC Cyber Security Program* (Reference 23), including guidelines and policies referenced therein.

Complete information describing the security mechanisms used to prevent unauthorized access to its computers and telecommunications equipment, including internal policies, procedures, training, hardware and software, etc., will be furnished in the NANPA's Security Plan.

The NANPA is also subject to security provisions in other sections of this document.

2.10.19 Secure Work Area

All work areas shall have limited access and secured record retention practices to ensure that service provider-specific and assignee-specific data is afforded the level of security required to maintain its designated security status. The NANP administration system shall have, at a minimum, security measures that are in conformance with the *FCC Cyber Security Program* (Reference 23). Systems shall include appropriate security measures for confidential data and accessibility for all service providers and assignees to their own information through an appropriately secured mechanism.

2.10.20 Physical Security

The NANPA shall provide suitable security for any and all computer systems that contain Numbering Resource assignment information and proprietary applicant information. This includes any system that is connected to any telecommunications network. The NANPA shall maintain and enforce physical security procedures that conform to the requirement to maintain confidential and proprietary information. The NANPA also shall be responsible for the activities of any subcontractors to ensure the security of all systems and data, including requiring all subcontractors to execute a nondisclosure agreement. The NANPA shall ensure that any data requested by a governmental non-NANP entity is protected as confidential by that entity through applicable law or another documented nondisclosure mechanism.

2.10.21 Site Visits

The FCC, with or without notice to the NANPA, shall have the right to make visits to the NANPA facilities to review safety/security requirements. If the safety and physical security procedures do not comply with those specified, the NANPA shall correct such noncompliance within ten (10) business days. In the event of noncompliance, the NANPA shall implement corrective measures and give notice of such implementation to the FCC, and the FCC may make one or more follow-up visits to the affected site, as necessary, to confirm that the deficiency has been rectified. The FCC's rights under this paragraph shall not in any way limit the FCC's ability to visit any site for reasons other than a safety/security visit.

Inspections shall include, but not be limited to, the facilities of subcontractors, NANPA or subcontractor maintenance organizations, and remote workstations used to process NANPA data.

2.10.22 Data Accessibility

The NANP administration system, and any other NANPA systems containing Numbering Resource administration data, shall have logon ID and password access. Formal access shall be initiated upon receipt of a completed logon ID request form having the proper written approvals from the requesting organization. The user's security requirement sets the correct level of record access and system capabilities. For forms and reports requiring an applicant signature, a valid logon ID and password or use of an API key (as described in Section 2.14.5) shall be considered tantamount to an applicant signature. The NANPA shall provide state commission limited, password-protected access to the numbering administration database for applicable resources (*e.g.*, geographic CO codes, thousands-blocks).

2.10.23 Unauthorized Access

In the event that the NANPA becomes aware of an unauthorized access to its systems or user, service provider or assignee data, the NANPA shall immediately: (1) notify the FCC and the applicable user(s) by e-mail, (2) investigate the unauthorized access, and (3) subject to reasonable access, security and confidentiality requirements, provide the FCC, users, and their designees with reasonable access to all

resources and information in the NANPA's possession as may be necessary to investigate the unauthorized access. The FCC shall have the right to conduct and control any investigation relating to unauthorized access that it determines is appropriate.

2.11 Implementation Plan

The contractor shall provide an Implementation Plan to the FCC within 30 days of contract award, and an update of the Implementation Plan 30 days prior to the takeover of NANP Administration and Pooling Administration. The objective of this Implementation Plan shall be to achieve a seamless continuance of all NANPA and Pooling Administration services across Terms of Administration.

2.12 NANPA Transition to Successor

There shall be a transition from the current administrator to the new administrator should the NANPA responsibility be awarded to a new party. The contractor shall transfer, in the case of termination or at the expiration of the Term of Administration, to the FCC or designee all hardware, software, web sites and rights to software contracts and other intellectual property as outlined in the Transition Plan.¹¹

This NANPA transition is additionally subject to the termination and continuity provisions in the solicitation. All bidders shall identify transition-related costs separately, including costs for transition from its predecessor and costs for transition to a successor.

Any other equipment or contracts associated with NANPA day-to-day operations shall transfer. This shall include but is not limited to:

- NAS and all its accounts and supporting documentation
- Approved cloud hosting services and cloud-based applications
- Computers and related equipment and software
- Other peripheral devices
- All NANPA and Numbering Resource records, both current and stored
- Web site URLs (www.nationalnanpa.com and www.nanpa.com)
- Also see the Transition Plan

2.12.24 Transfer Efficiency

The transfer of all property shall be performed in a manner that ensures an efficient and orderly transition of the NANP Administration System and associated equipment to a successor's environment in a fully operational state.

2.12.25 Technical Support

The contractor shall provide at least 15 business days, but up to 45 business days over a six (6)-month period, if required, of technical support to ensure a smooth transition of the system.

2.12.26 Documentation

The contractor shall provide the FCC with copies of all documentation specified in the System Documentation Plan.

2.13.27 Transition Plan

The contractor shall, 180 calendar days prior to contract termination, provide a detailed plan for an efficient and orderly transition. This transition plan shall follow the format, as applicable, of the *Software Transition Plan (STrP)* (Reference 26).

¹¹ See also 47 CFR §52.13

2.14 Term of Administration

The contractor shall serve for a period determined by the FCC.

2.15 Interaction and Interfaces

The NANPA shall interact with the NPAC, the BIRRDs/LERGTM Routing Guide vendor, state regulatory authorities, federal and NANP member country regulatory authorities, media, as well as with service providers and assignees, PSAPs and 9-1-1 system providers.

The NANPA shall provide the following constituency interfaces:

<u>Constituent</u>	<u>Interface</u>
Service providers	Web, email, FTP, RESTful API
Applicants, assignees	Web, email, FTP, RESTful API
NPAC Vendor	Email, mechanized interface
BIRRDs/LERG TM Vendor	Web, email, mechanized interface
Regulatory agencies	Web, email
Media & general public	Web, email
PSAPs	Web, email
9-1-1 system providers	Web, email

At this writing, Telcordia Technologies, Inc. dba iconectiv® is the NPAC vendor. iconectiv® also maintains BIRRDs (Business Integrated Routing and Rating Database System) and the LErgTM Routing Guide. Service providers and assignees, federal and state regulators, and NANP member countries are responsible for establishing mutually-agreed upon communication interfaces with the NANPA that meet their individual equipment requirements.

Refer to Appendix B in this document for current contact information for the NPAC and BIRRDs/LErgTM vendors.

More detailed discussion of the duties and interactions with these constituents can be found in the following sections and the applicable industry guidelines.

2.14.1 Interface with the Media

The NANPA shall be required to communicate with the media to the extent permitted by the FCC, as well as state and federal regulatory bodies concerned with numbering matters. The NANPA shall prepare press releases and speak to the public on matters relating to all aspects of administration and management of NANP resources. In situations where its contractor status is not obvious to third parties, while making representations to the public, industry, and others, the NANPA shall identify itself in such a way as to avoid creating an impression in the minds of members of the public that it is a government official. The NANPA must also ensure that all documents or reports produced by it are suitably marked as NANPA products or that NANPA participation is appropriately disclosed. Information and data shared with the news media shall be factual in nature, publicly available and previously made known to the industry and regulators prior to media disclosure.

2.14.28 Interface with BIRRDs and LErgTM Routing Guide

The NANPA shall maintain access to iconectiv®'s BIRRDs and the LErgTM Routing Guide¹² to perform both its administrative functions and the required Enterprise Service. The BIRRDs interface

¹² iconectiv® maintains the BIRRDs database, which is used to produce the LErgTM Routing Guide.

consists of a web-based GUI interface. The GUI interface shall be used to enter data into BIRRDs for central office code and thousands-block assignments. The NANPA shall arrange directly with iconectiv® for BIRRDs and LERG™ Routing Guide access. In addition to the GUI interface, the NANPA shall work with iconectiv® to develop a mechanized interface to handle all numbering resource assignments and returns performed by NANPA and required to be entered into BIRRDs, based upon INC guidelines.

2.15.29 Interface with the Number Portability Administration Center (NPAC)

The NANPA shall maintain an NPAC vendor email and mechanized interface (or any other interface which the NANPA and NPAC Vendor shall agree upon and obtain approval on from the FCC). The mechanized interface shall be used to notify the NPAC vendor about thousands-blocks that are being assigned or disconnected, and to receive acknowledgement from the NPAC vendor that the thousands-block assignment/disconnect information has been received. It shall also be used to receive notification from the NPAC vendor that the NPAC vendor has broadcast the thousands-block assignment or disconnect data.

The interface with the NPAC vendor also shall be used to request information from the NPAC about central office codes (also referred to as NXXs) and thousands-blocks that are about to be reclaimed by NANPA to ensure that there are no ported Telephone Numbers (TNs) contained within the NXX or thousands-block targeted for reclamation. If the NANPA finds that there are ported TNs within the targeted NXX or the thousands-block is more than 10% contaminated, the NANPA shall refer to the appropriate guidelines for alternative reclamation processing steps (e.g., solicit a new code holder from those service providers with ported TNs within the targeted NXX or solicit a new block holder from those service providers with ported TNs within the targeted thousands-block).

The following list identifies each of the seven (7) NPAC regions and the states that are associated with each NPAC region in the United States. The North American Portability Management LLC (NAPM LLC) manages the contractual relationship with the NPAC vendor, and the NANPA shall contact the NAPM LLC to coordinate interfaces with the NPAC for the purposes of central office code and pooling administration.

- Mid-Atlantic Region: Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia
- Midwest Region: Illinois, Indiana, Michigan, Ohio, Wisconsin
- Northeast Region: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont
- Southeast Region: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee
- Southwest Region: Arkansas, Kansas, Missouri, Oklahoma, Texas
- West Coast Region: California, Hawaii, Nevada
- Western Region: Alaska, Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming

2.14.4 Interface with IAC (Interexchange Access Customer) Database

The NANPA shall maintain read-only access to the IAC (Interexchange Access Customer) database, which is administered by iconectiv® as the maintenance agent for the American National Standards Institute (ANSI). The IAC is also referred to as the Access Customer Name Abbreviation (ACNA) in the *Carrier Identification Code (CIC) Assignment Guidelines* (Reference 15). NANPA is responsible for verifying the ACNA in the assignment and administration of Carrier Identification Codes (CICs). The NANPA shall arrange directly with iconectiv® for this read-only access.

2.15.5 Interface with the Service Providers, Numbering Resource Assignees and Applicants

The NANPA shall maintain a Service Provider (SP) and Numbering Resource assignee/applicant interface to be used to receive NANP resource applications and to send assignments, in a relay between the NANPA and an applicant or assignee. Any or all of the following interfaces also may be necessary, depending on the particular applicant or assignee with which interaction is taking place or the Numbering Resource being requested, and thus, shall be made available by the NANPA: system-to-system (FTP and RESTful API), web site, and e-mail (with facsimile to be used only if other methods are not technically available). For example, these interfaces shall be used to receive Numbering Resource requests and to send assignments, and to receive Numbering Resource returns/disconnects and to send confirmations of such. These interfaces are also used for Numbering Resource Utilization and Forecast (NRUF) report submissions and to return a confirmation receipt to the service provider after an application and/or form has been accepted by the system for processing. The interfaces also shall be used to communicate information to Numbering Resource assignees (e.g., NANP Notification System (NNS) notices, solicitations for new code holders or block holders, reminders for report filings, etc.). NANPA is responsible for ensuring the availability of these interfaces. All activities facilitated in the newly combined NAS system including but not limited to creating, modifying, deleting and checking the status of block requests, block modifications, block disconnections, CO code requests, CO code modifications, CO code disconnections, PSTN activation notifications, Part 4 block notifications, forecasts, and p-ANI requests shall be supported via a RESTful system-to-system (i.e., API) interface. Authentication and authorization for this API shall be done using an API key, which can be created and revoked by users via a web interface (API key management). Furthermore, this API shall support uploading documents and referencing previously uploaded documents in subsequent programmatic requests.

2.15.6 Interface with the FCC

This interface shall be used to obtain the information necessary to conform to the FCC rule found at 47 CFR §1.1910 and commonly referred to as the "Red Light Rule." This rule provides that anyone filing an application or seeking a benefit from the FCC or one of its components (including the Universal Service Administrative Corporation, Telecommunications Relay Service, or the NANPA) who is delinquent in debts owed to the FCC will be barred from receiving a license or other benefit until the delinquency has been resolved. Under this rule, when an application or request for benefit is filed, the FCC Registration Number (FRN) will be checked to determine if the entity or person is delinquent on a debt owed to the FCC. NANPA shall upload into the NAS the latest Red Light List made available by the FCC each business day. NANPA shall track what time each Red Light List was uploaded to the NAS so that information is available to assist applicants trying to clear themselves from the list, as necessary. NAS compares the FRNs appearing on the FCC Red Light list with the FRNs appearing in NAS NRUF data for the current reporting cycle, and then creates a file of OCNs with their associated FRNs which have been identified as delinquent. If the NANPA finds that the applicant's FRN appears on the FCC's Red Light List, the NANPA will withhold assigning Numbering Resources to that entity.

2.15.7 Interface with the State Regulatory Agencies

The NANPA shall interface with regulatory agencies by web, email, voice, or U.S. mail. This interface shall support state regulatory access as appropriate to forms and applications filed by service providers, Numbering Resource assignees and applicants. It may also be necessary to fulfill a data request by other means, such as voice or facsimile. For example, the interface shall be used to provide a regulator NRUF forecast and utilization data for an NPA within its jurisdiction.

The NANPA may be called upon to testify in regulatory hearings. In these cases, the NANPA shall ensure that its testimony is factual, specific to the scope and requirements of this contract. Testimony in regulatory hearings shall be treated as an Enterprise Service (see Section 15).

The NANPA also shall be responsible for interfacing with regulatory authorities in person, when requested by such authority. The nature of these meetings may be educational or informational, depending on the circumstances and issues identified.

2.14.8 Interface with the ITU Technical Standards Bureau

The NANPA shall interface with the ITU-Technical Standards Bureau (TSB) when required to provide information regarding the NANP. This information shall consist of the latest web links, contact individuals and timely information on the NANP, and any changes to the NANP (e.g., the introduction of new NPAs) as required from national numbering administrators per ITU Recommendations.

2.15.9 Interface with the Study Group A and ITU Study Group 2

The NANPA shall interface with the U.S. State Department and participating service providers through its attendance at Study Group A and ITU Study Group 2 meetings and activities.¹³ Study Group A advises the State Department, through the United States Telecommunications Advisory Committee, on issues related to U.S. policy, standardization, regulatory, and competitive aspects of the operations and tariffs of telecommunications services. The NANPA's role shall be to advise the participants as to whether international issues and conflicts shall have an impact on the management and availability of NANP resources.

2.16 Interface with the MBI Administrator

The NANPA shall be required to work with the neutral third party Mobile Identification Number (MIN) Block Identifier (MBI) administrator, for the administration and assignment of MBIs to MIN-based wireless providers in the United States and its territories. Upon request, the NANPA shall make available to the MBI Administrator information on the resources that are available as assignable MBIs.

2.15 Technical Requirements Document Maintenance

The NANPA shall be required to review and update this Technical Requirements Document semi-annually and upon the implementation of any change order, and provide the updated document to the NANC or its designee. Updates shall include, but not be limited to, any new functionality added to the NAS or the web site, any change orders that have been implemented since the last review and update, changes to any specific industry guidelines that are referenced in the document, any industry guidelines changes that affect or conflict with language in the document, and any new Numbering Resources designated and managed by the NANPA.

¹³ 47 CFR §52.13

Section 3: NANP Administration

The NANPA is responsible for management, administration, and assignment of all designated Numbering Resources within the NANP. The following list identifies NANP Numbering Resources that fall under the NANPA's direct responsibility and management:

- NPA Codes (Geographic and Non-Geographic)
- Geographic CO (NXX) Codes
- Geographic thousands-blocks
- Geographic p-ANIs
- Non-Geographic 5XX-NXX Codes
- Non-Geographic Easily Recognizable Code (ERC) 900-NXX Codes
- N11 Service Codes (reporting only)
- Non-Geographic Hearing Impairment 800-855-XXXX line numbers
- 555 [NXX] Line Numbers (reference only)
- Non-Geographic Carrier Identification Codes (CICs)
- Non-Geographic Vertical Service Codes (VSCs)
- Non-Geographic Automatic Number Identification Information Integer (ANI II) Digits
- Additional Numbering Resources, as may be defined.¹⁴

The sections that follow describe each resource, and summarize the NANPA's responsibilities. The NANPA shall perform assignment and administration functions for each of the above resources in conformance with regulatory directives and the relevant INC guidelines for those resources. The NANPA also is required to report on the status of each resource (see Section 11).

3.17 Numbering Plan Areas (NPAs)

The NPA refers to an area code that is the first three digits of a ten-digit telephone number. NPAs are classified as either geographic or non-geographic:

- Geographic NPAs are NPAs that correspond to discrete geographic areas within the NANP area.
- Non-geographic NPAs are NPAs that do not correspond to discrete geographic areas, but which are instead assigned for services with attributes, functions, or requirements that transcend specific geographic boundaries.

States within the United States have been delegated area code relief authority and may have unique directives and legal requirements associated with approval and implementation of any NPA relief activity.

The NANPA is responsible for assigning NPAs when the criteria for such an assignment have been met. The NANPA shall ensure that an NPA assignment conforms to regulatory directives and NPA relief plans (from the FCC and state commissions) and industry guidelines (*e.g.*, from the INC).

3.18 Geographic Central Office (CO) Codes

The three digits after the NPA are referred to as the CO Code. The NANPA shall monitor the actual and forecasted assignment of geographic CO Codes through the Months-to-Exhaust (MTE) form filed with each CO Code application. In addition, forecast and utilization data are submitted to the NANPA by reporting service providers in the NRUF Report. This information is used to plan for the assignment of new NPA codes when existing NPA codes near exhaust (*i.e.*, additional telephone numbers are required to serve projected demand). The NANP Administration function also includes consultation with affected service providers and state commissions when the depletion of central office codes necessitates relief. The NANPA shall initiate the reclamation process for geographic CO codes assigned to entities that fail to

¹⁴ See also 47 CFR §52.13

meet the terms specified in the assignment guidelines and/or by directives from the appropriate regulatory authorities.

3.3 Geographic Thousands-Blocks

The NANPA is responsible for administering thousands-block number pools by assigning, managing, forecasting, reporting and processing data that will allow service providers in rate centers designated for thousands-block number pooling to receive telephone numbers in blocks of 1,000. References to thousands-blocks or blocks throughout this document are specific to thousands-block (NXX-X) number pooling in the United States and Puerto Rico only, unless otherwise specified. Thousands-block number pooling involves the allocation of blocks of 1,000 sequential telephone numbers within the same NPA and NXX to different service providers who serve customers within the same NPA and rate center. All 10,000 numbers within each NPA-NXX continue to be assigned to one (1) rate center, but are allocated among multiple service providers from a shared industry inventory and administered at the thousands-block level (e.g., NPA-NXX-X000 through X999) for assignment to service providers participating in that rate center. The NANPA shall monitor the actual and forecasted assignment of thousands-blocks through the Months-to-Exhaust (MTE) form filed with each thousands-block application. In addition, thousands-block forecast data by month is submitted to the NANPA by service providers in Appendix 1 of the *Thousands-Block (NXX-X) Pooling Administration Guidelines* (Reference 6). This information is used to plan for the replenishment of the thousands-block inventory pool from new central office codes as needed and assignment of new NPA codes when existing NPA codes near exhaust (i.e., additional telephone numbers are required to serve projected demand). The NANPA shall initiate the reclamation process for thousands-blocks assigned to entities that fail to meet the terms specified in the assignment guidelines and/or by directives from the appropriate regulatory authorities.

3.4 Geographic p-ANIs

The NANPA is responsible for managing and assigning non-dialable pseudo-Automatic Number Identification numbers (p-ANIs), which are used to support the routing of wireless and VoIP 9-1-1 emergency calls on a national basis, including the United States, Puerto Rico and the US Virgin Islands. A p-ANI is a number, consisting of the same number of digits as an Automatic Number Identification (ANI), which is not a North American Numbering Plan telephone directory number and may be used in place of an ANI to convey special meaning to the selective router, public safety answering point (PSAP), and other elements of the 911 system. The NANPA is responsible for managing and assigning non-dialable p-ANIs, out of the 211 NXX and 511 NXX¹⁵ on a national basis including Puerto Rico and the Virgin Islands. The NANPA shall monitor the actual and forecasted assignment of p-ANIs through the information filed with each p-ANI application, the semi-annual forecast data submitted to the NANPA by p-ANI assignees and applicants in Appendix 1 of the *p-ANI Administration Guidelines* (Reference 34), and the annual utilization data submitted to the NANPA by p-ANI assignees in Appendix 2 of the *p-ANI Administration Guidelines* (Reference 34). The NANPA shall initiate the reclamation process for p-ANIs assigned to entities that fail to meet the terms specified in the assignment guidelines and/or by directives from the appropriate regulatory authorities.

3.5 Non-Geographic 5XX-NXX Codes

Non-Geographic 5XX-NXX codes are a non-geographic Numbering Resource to be used for applications which are non-geographic in nature, are not assigned to rate centers and may or may not traverse the PSTN, but do require an E.164 addressing scheme. The use of this NANP Numbering Resource is to communicate with both fixed and mobile devices, some of which may be unattended. This resource may be used for applications enabling machines, which would include but not be limited to wireless devices

¹⁵ Initially, the 211 and 511 NXXs, but also any subsequent NXXs designated for p-ANI purposes when the 211 and 511 NXXs exhaust in a particular NPA.

and appliances, the ability to share information with back-office control and database systems and with the people that use them. Service is limited only by terminal and network capabilities and restrictions imposed by the service provider.

The NANPA shall manage, assign and administer NXX codes in the 5XX NPAs pursuant to regulatory directives and the *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14). The NANPA shall monitor the actual and forecasted assignment of these 5XX-NXX codes through the Months-to-Exhaust (MTE) form filed with each application. In addition, forecast and utilization data are submitted to the NANPA by reporting service providers in the NRUF Report. This information is used to plan for the assignment of new NPA codes when existing NPA codes designated for non-geographic 5XX-NXX services near exhaust (*i.e.*, additional telephone numbers are required to serve projected demand). The NANPA shall initiate the reclamation process for 5XX-NXX codes assigned to entities that fail to meet the terms specified in the assignment guidelines and /or by directives from the appropriate regulatory authorities.

3.6 Non-Geographic Easily Recognizable Code (ERC) 900-NXX Codes

The 900 NPA is an ERC used for information services in which the caller pays for call setup and the specific services associated with the 900 call. The 900-NXX codes (also referred to as 9YY-NXX codes) shall be assigned and used only for pay-per-call information services. The codes, referred to as "Pay-Per-Calls," may be accessed by the public over the PSTN using the dialing format 900-NXX-XXXX.

The NANPA shall manage, assign, and administer 9YY-NXX codes in the 900 NPA pursuant to regulatory directives and the *9YY-NXX Code Assignment Guidelines* (Reference 12). The NANPA shall monitor the actual and forecasted assignment of these 900-NXX codes. In addition, forecast and utilization data are submitted to the NANPA by reporting service providers in the NRUF Report. This information is used to plan for the assignment of new NPA codes when the existing NPA code designated for these services nears exhaust (*i.e.*, additional telephone numbers are required to serve projected demand). The NANPA shall initiate the reclamation process for 9YY-NXX codes assigned to entities that fail to meet the terms specified in the assignment guidelines and/or by directives from the appropriate regulatory authorities.

3.7 N11 Service Codes

Codes in the N11 format (*e.g.*, 911) are referred to as Service Codes. There are eight N11 service codes available in the NANP. The FCC determines the uses of N11 codes in the U.S. and its territories, which have been assigned as follows:

211	Community Information and Referral Services
311	Non-emergency Police and Other Governmental Services
511	Traffic and Transportation Information (US); Provision of Weather and Traveler Information Services (Canada)
711	Telecommunications Relay Service (TRS)
811	Access to One Call Services to Protect Pipeline and Utilities from Excavation Damage (US); Non-Urgent Health Telerriage Services (Canada)
911	Emergency

The 411 and 611 codes have not been assigned by the FCC. Carriers, however, use the 411 and 611 codes for access to their directory assistance and repair services respectively. Unassigned codes may also be assigned locally with the understanding that a local assignment shall be discontinued, on short notice, if

the unassigned codes are requested for nationally assigned purposes. Some U.S. states have permitted local use of certain N11 codes, pending FCC designated assignments. In Canada, the assignment of the N11 codes is generally consistent with the table above, except for code 511 which has been assigned for weather and traveler information services and 811 for non-urgent healthcare telephone triage service. Other NANP member countries may in the future designate specific uses for N11 codes within their jurisdictions.

3.8 Non-Geographic Hearing Impairment 800-855 XXXX Line Numbers

Line numbers from the 800-855 CO code in the format 800-855-XXXX are used for assisting persons with hearing impairments. These numbers are assigned individually at the line level. The NANPA shall manage, assign, and administer line numbers within the 800-855-XXXX resource pursuant to regulatory directives and the *800-855 Number Assignment Guidelines* (Reference 16). Other NANP member countries may designate specific uses for 800-855-XXXX line numbers in the future.

3.9 555 [NXX] Line Numbers

The 555 [NXX] code within each geographic NPA and its line numbers are currently not available for assignment. However, the 555-1212 line number in each geographic NPA is grandfathered for directory assistance purposes, and the fictitious non-working line numbers 555-0100 through 0199 remain reserved for entertainment and advertising purposes. Future use of this resource shall be determined by the FCC and/or the INC. The NANPA shall maintain a link on its web site to the *555 NXX Line Number Reference Document* (Reference 13), and answer questions about the limited remaining uses as needed.

3.10 Non-Geographic Carrier Identification Codes (CICs)

A CIC is primarily used to route and bill calls in the public switched telephone network. A CIC is a four-digit code in the format XXXX, where X is any digit from 0 through 9. Separate CIC pools are maintained for Feature Group B (line side) access and Feature Group D (trunk side) access.

NANPA assigns CICs to Local Exchange Carriers, purchasers of Feature Group B or D access, switchless resellers, Billing and Collection Clearinghouses, and Interconnected VoIP Service Providers.

The NANPA shall manage and assign CICs in accordance with the *Carrier Identification Code (CIC) Assignment Guidelines* (Reference 15) and/or FCC directives. The NANPA shall initiate the reclamation process for CICs assigned to entities that fail to meet the terms specified in the assignment guidelines and/or by directives from the FCC.

3.11 Non-Geographic Vertical Service Codes (VSC)

VSCs are standardized codes dialed by customers to access network features and services (e.g., call forwarding) provided by network service providers. These codes appear in the *XX or *2XX format. The NANPA shall assign, manage, and approve new VSC assignment requests in accordance with the *Vertical Service Code (VSC) Assignment Guidelines* (Reference 17).

3.12 Non-Geographic Automatic Number Identification (ANI) II Digits

ANI II digits are two (2) digits that are sent with the originating telephone number identifying the type of originating station (e.g., Plain Old Telephone Service (POTS), hotel/motel). The NANPA shall assign the digits and track the assignments. ANI II digits are assigned by the NANPA at the request of the INC. The assignment of an ANI II digit does not imply its ubiquitous availability.

Section 4: Geographic Central Office (CO) Code Administration

4.19 Requirements

The NANPA shall manage the CO Code resources in accordance with federal regulatory requirements and the latest version of the published *Central Office Code (NXX) Assignment Guidelines* (Reference 8) or its successor document. The NANPA shall perform the CO Code administration that encompasses the following major functional categories:

- User¹⁶ Services
- Processing
- Client and Internal Communication / Notification Functions
- Status Reporting
- Tracking CO Code Utilization for NPA relief
- Managing jeopardy conditions

The NANPA, in order to perform CO Code Administration functions, shall maintain considerable knowledge of local/regional environments, including geography, demographics, growth patterns, local dialing plans, and eligibility requirements. This knowledge shall be applied to each CO Code assignment. Local conditions for each NPA shall be posted to the NANPA web site.

When there are changes to the *Central Office Code (NXX) Assignment Guidelines* (Reference 8) or there are regulatory directives, the NANPA shall institute a training program to educate its CO Code Administration staff in order to ensure consistent application. Training shall be completed within five (5) business days before the date the change to the guidelines becomes effective.

Within 90 days of contract award, the contractor shall provide to the Contracting Office Representative (COR) a Change Management Plan for adapting the CO Code assignment practices in accordance with updates and modifications to the *Central Office Code (NXX) Assignment Guidelines* (Reference 8) and regulatory directives. The COR shall review the plan and request any necessary changes within 60 days, which the contractor will effectuate before implementation.

4.20 Functional Specifications

CO Code administration activities include the key functional requirements detailed below.

4.20.30 User Services

The NANPA shall produce and make available information regarding CO Code Administration processes, guidelines, procedures, interfaces, and services.

Upon request, the NANPA shall provide information on how to obtain current documents related to CO code administration. The NANPA may refer users to web sites where information can be located and downloaded. These documents currently include, but are not limited to:

- *Central Office Code (NXX) Assignment Guidelines* (Reference 8)
- *Thousands-Block (NXX-X) Number Pooling Administration Guidelines* (Reference 6)
- *Location Routing Number (LRN) Assignment Practices* (Reference 20)
- *Guidelines for the Administration of Telephone Numbers* (Reference 45)
- *NANP Numbering Resource Utilization/Forecast (NRUF) Reporting Guidelines* (Reference 7)
- *NPA Code Relief Planning and Notification Guidelines* (Reference 19)

¹⁶ User represents code applicants, code holders, regulatory agencies, and the general public.

- *NPA Allocation Plan and Assignment Guidelines* (Reference 18)
- *Jeopardy Procedures for a particular NPA*
- *Recommended Notification Procedures to Industry for Changes in Access Network Architectures* (Reference 22)

The NANPA shall provide assistance to all entities who use Numbering Resources and suggest alternatives, when possible, that may assist users with Numbering Resource optimization and utilization issues. The NANPA shall maintain a working knowledge of applicable state regulations and local dialing plans. The NANPA shall assist code applicants with understanding and completing all forms and appendices associated with INC guidelines. The NANPA shall educate users. Such education may include, but is not limited to, providing training videos, job aides, and/or providing necessary forms and instructions on the NANPA web site. The NANPA shall notify its users and interested parties when industry guidelines or applicable regulatory directives have changed. The NANPA shall provide electronic notification of administrative process and procedural changes within five (5) business days of the change being identified by the NANPA. Implementation of these changes shall include a transition period before the new process or procedure becomes effective.

The NANPA shall respond to inquiries regarding available and assigned CO Codes. Such response may consist of referring the user to a specific page on the NANPA web site.

4.20.31 Processing

The NANPA shall receive and verify applications (Part 1) for CO Codes in accordance with FCC directives and the INC guidelines. The NANPA shall provide a confirmation (Part 3) in response to every CO Code application received. The subject line of the Part 3 shall contain the following information: rate center abbreviation, state, NPA-NXX, Part 3 for tracking ID XXX and the status of application (*i.e.*, approved, denied, suspended or withdrawn). However, if the Part 3 is denying, suspending or withdrawing a new CO Code request, no NPA-NXX shall appear in the subject line.

If a state commission has not yet chosen a relief method and established a relief date, the NANPA, as CO Code administrator, and the industry shall devise the jeopardy conservation or rationing measures, consistent with the industry guidelines. As CO Code Administrator, the NANPA shall be aware of and adhere to any limits on code assignments as ordered by state commissions or agreed to by industry, as well as any other provisions of rationing plans. The NANPA shall apply CO Code optimization practices in accordance with FCC directives and the *Central Office Code (NXX) Assignment Guidelines* (Reference 8), as appropriate.

The NANPA shall also:

- Maintain a CO code conflict database and publish on the NANPA's web page CO codes by NPA that are "unavailable for assignment" due to dialing, routing and/or rating conflicts
- Include in this list CO codes that are unavailable due to permissible services identified by the state tariff, CO codes that are used for testing, and CO codes that are used for unique call routing/rating arrangements
- Provide, as needed, details of local/regional environments including, for example, geography, demographics, growth patterns, local dialing plans, and eligibility requirements

4.20.32 Communication/Notification Functions

The NANPA shall post daily on its web site the NXXs assigned, available, and unavailable in each NPA. This information shall be updated as changes occur. Other means of distributing reports shall be available as necessary. The NANPA shall follow the *Central Office Code (NXX) Assignment Guidelines*

(Reference 8) for notification of CO Code assignments. The NANPA shall enter CO code data through a mechanized interface into the BIRRDs database, accurately and within the timeframes required in the INC guidelines. The NANPA also shall have the capability to input rating and routing data into the BIRRDs database as an Enterprise Service to a code holder.

The NANPA shall issue notification of all CO Code jeopardy situations and other pertinent CO Code administration activities to the appropriate regulatory agencies and the affected industry members.

4.20.33 Status Reporting

For CO Code Administration, the NANPA shall monitor and report the status of NXXs in each NPA, including a total by status (e.g., total available, total unavailable and total assigned NXXs). These reports shall be generated and posted to the NANPA web site each business day.

4.20.34 Tracking CO Code Utilization for NPA Relief

The NANPA shall fulfill the process responsibilities in accordance with the *NPA Code Relief Planning and Notification Guidelines* (Reference 19) and regulatory directives, including the following:

- Determine when to initiate NPA Relief by continually monitoring CO Code growth and projecting exhaust.
- Upon the identification of a potential exhaust situation, notify appropriate regulatory authorities and affected parties within the NPA.
- If necessary, immediately organize a relief planning meeting to obtain local industry consensus and subsequent regulatory direction for a relief implementation plan.

4.2.6 Management of Jeopardy Conditions

The NANPA shall:

- Declare a jeopardy NPA condition within any NPA that meets the conditions established in the appropriate industry guidelines and regulatory orders
- Monitor CO Code growth and projected exhaust
- Notify appropriate regulatory authorities and affected parties within the NPA
- Notify the industry that jeopardy code rationing is available if so desired, or may be specified in a pending state commission order if the industry does not come to consensus on final jeopardy procedures
- Implement NPA-specific conservation measures as a part of CO Code application processing, if necessary, subject to local industry consensus or regulatory direction

4.21 Management of the CO Code Inventory

The NANPA shall track and monitor months-to-exhaust (MTE), forecast, and utilization reports so that it shall be able to forecast demand and anticipate the need for relief to avoid premature exhaust of each NPA and the NANP.

4.22 CO Code Reclamation

In accordance with paragraph 237 of FCC 00-104 (Reference 1), the NANPA shall initiate the reclamation process, as specified in the *Central Office Code (NXX) Assignment Guidelines* (Reference 8). The NANPA shall receive and process Part 4 confirmations from code holders during the six-month period following the LERGTM Routing Guide effective date of the code specified on the Part 3. Receipt of a Part 4 from a code holder certifies that the code has been placed in service. The NANPA shall acknowledge its Part 4 receipt by issuing the code holder a Part 5 Administrator's Part 4 Receipt/Confirmation. The NANPA shall maintain a tracking system for receipt of Part 4s and return

notification of Part 5 Forms. No further action is required of the code holder once a Part 4 has been submitted.

Not later than one (1) month prior to the end of the six (6)-month period, the NANPA shall send a reminder notice to code holders if no Part 4 Form has been posted for the code now assigned to them. The subject line of the reminder notice shall contain the following information: rate center abbreviation, state, NPA-NXX, Confirmation of Code Activation (Required) – Part 4. The body of the reminder notice shall contain, at minimum, the following information: NPA-NXX, switch CLLI, OCN, OCN name, Part 3 effective date and the Part 4 due date. The NANPA shall send a second notice to the service provider if no Part 4 is received within six (6) months of the original code effective date. The subject line of this second notice shall contain the following information: rate center abbreviation, state, NPA-NXX, Part 4 Delinquent Notice. The body of the reminder notice shall contain, at minimum, the following information: NPA-NXX, switch CLLI, OCN, OCN name, Part 3 effective date and the Part 4 due date. This second notice also shall inform the service provider that it must submit the Part 4 to the appropriate regulatory authority.

If requested, the NANPA shall submit lists of service providers and their OCNs who are delinquent in the return of the Part 4 forms to state regulators monthly. If a code holder fails to submit a Part 4 within the timeframe specified by the FCC, the NANPA shall initiate the reclamation procedures, keeping accurate and complete records for each action taken. The NANPA shall obtain either state or FCC regulatory approval prior to reclaiming codes.

The NANPA shall maintain a current point of contact list for CO Code reclamation. Regulators and service providers are to be included on the list. In addition, a contact list for all other NANP members shall be maintained, if necessary.

Section 5: Geographic Thousands-Block Pooling Administration

5.23 Requirements

The NANPA shall manage the thousands-block resources in accordance with federal regulatory requirements and the latest version of the published *Thousands-Block (NXX-X) Number Pooling Administration Guidelines* (Reference 6) or its successor document. The NANPA shall perform the thousands-block administration that encompasses the following major functional categories:

- User¹⁷ Services
- Management of the thousands-block inventory pools
- Processing
- Client and Internal Communication / Notification Functions
- Status Reporting
- Reclamation

When there are changes to the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6) or there are regulatory directives, the NANPA shall institute a training program to educate its thousands-block administration staff in order to ensure consistent application. Training shall be completed within five (5) business days before the date the change to the guidelines becomes effective.

Within 90 days of contract award, the contractor shall provide to the COR a Change Management Plan for adapting the thousands-block assignment practices in accordance with updates and modifications to the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6) and regulatory directives. The COR shall review the plan and request any necessary changes within 60 days, which the contractor will effectuate before implementation.

5.24 Functional Specifications

Thousands-block pooling administration activities include the key functional requirements detailed below.

5.24.35 User Services

The NANPA shall produce and make available information regarding thousands-block pooling administration processes, guidelines, procedures, interfaces, and services.

Upon request, the NANPA shall provide information on how to obtain current documents related to thousands-block pooling administration. The NANPA may refer users to web sites where information can be located and downloaded. These documents (referenced in Section 16) currently include, but are not limited to:

- *Central Office Code (NXX) Assignment Guidelines* (Reference 8)
- *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6)
- *Location Routing Number (LRN) Assignment Practices* (Reference 20)
- *Guidelines for the Administration of Telephone Numbers* (Reference 45)
- *NANP Numbering Resource Utilization/Forecast (NRUF) Reporting Guidelines* (Reference 7)
- *NPA Code Relief Planning and Notification Guidelines* (Reference 19)
- *NPA Allocation Plan and Assignment Guidelines* (Reference 18)
- *Jeopardy Procedures for a particular NPA*
- *Recommended Notification Procedures to Industry for Changes in Access Network Architectures* (Reference 22)

¹⁷ User represents thousands-block applicants, thousands-block assignees, regulatory agencies, and the general public.

The NANPA shall provide assistance to all entities who use Numbering Resources and suggest alternatives, when possible, that may assist users with Numbering Resource optimization and utilization issues. The NANPA shall assist thousands-block applicants with understanding and completing all forms and appendices associated with the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6). The NANPA shall educate users. Such education may include, but is not limited to, providing job aides and providing necessary forms and instructions on the NANPA web site. The NANPA shall notify its users and interested parties when industry guidelines or applicable regulatory directives have changed. The NANPA shall provide electronic notification of administrative process and procedural changes within five (5) business days of the change being identified by the NANPA. Implementation of these changes shall include a transition period before the new process or procedure becomes effective.

The NANPA shall respond to inquiries regarding available and assigned thousands-blocks. Such response may consist of referring the user to a specific page on the NANPA web site.

5.2.2 Management of Thousands-Block Industry Inventory Pool

The NANPA shall be responsible for all activities associated with the industry inventory thousands-block pool establishment, management and on-going maintenance. The NANPA shall use all reasonable efforts to maintain sufficient blocks of 1,000 numbers to ensure that all participating service providers' requirements can be met, which is the objective of the industry inventory pool.

The NANPA shall maintain a current listing of designated rate centers selected for pooling implementation. Therefore the NAS shall be capable of implementing additional rate centers, modifying rate centers or their pooling status, or deleting rate centers.

Thousands-block assignments shall be made from NPA-NXX codes assigned to a single rate center inventory pool. The inventory pool shall be comprised of a rate center boundary, which covers the same geographic area. Different geographic rate centers shall maintain separate inventory pools.

Thousands-blocks shall be assigned from both contaminated (10% or less) and non-contaminated inventoried pooled thousands-blocks. Contamination occurs when at least one (1) telephone number within a donated or returned thousands-block is not available for assignment to customers of the thousands-block holder.

5.2.2.1 Thousands-Block Inventory Pool Level

The quantity of thousand blocks that need to be maintained in the inventory pool should be determined using the following criteria:

- The anticipated assignment rate of thousand blocks from the inventory pool
- No more than a six (6)-month inventory level
- The NANPA's analysis on all forecasts filed for each rate center inventory pool

The NANPA should make every attempt to have a sufficient quantity of blocks available for assignment to satisfy demand.

5.2.2.2 Industry Inventory Thousands-Block Pool Establishment Timeline for Rate Centers becoming Pooling Mandatory

The NANPA shall be responsible for developing the inventory pool implementation timeline in consultation with the industry, in conformance with applicable state or FCC orders, if/when thousands-

block pooling becomes mandatory in additional rate centers. The timeline shall specifically identify those rate centers. This timeline contains all the steps and dates that participating service providers shall be required to meet in order to implement thousands-block number pooling in a designated pooling rate center.

The timeline shall include the following activities:

- Designation of the pooling rollout schedule 90 calendar days prior to the start of pooling in a rate center
- First or Supplemental Implementation Meeting
- Forecast Report Date
- Block Protection Date
- Block Identification Date
- Date for completion of the industry inventory pool surplus or deficiency
- Block Disconnect Date
- Pool Start and Block Allocation Date
- Accounting for all blocks with ten (10) percent or less contamination

Additional details regarding requirements for establishing the industry inventory pool can be found in Appendix A of the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6).

5.2.2.3 Replenishment of the Thousands-Block Inventory Pool

The NANPA shall provide a mechanism for service providers to replenish the six (6)-month thousands-block inventory pool for each rate center, consistent with the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6).

5.2.2.3.1 Forecast

Service providers participating in thousands-block pooling are required to submit forecasted demand reports semi-annually to the NANPA. The NANPA shall use this data and the criteria in Section 5.2.2.1 to size and manage each rate center pool, and shall also use this data in determining NPA exhaust for relief planning purposes and for determining NANP exhaust.

5.2.2.3.2 Data Request Dates

The forecasted thousands-block data request shall be consistent with the NRUF reporting dates. The NANPA shall compile, at least semi-annually, aggregated pooling forecast data submitted by service providers pursuant to the industry guidelines for use in determining NPA and NANP exhaust.

5.2.2.3.3 Forecast Analysis

The NANPA shall use service provider forecasts to ensure that service providers are notified when there are insufficient thousands-blocks available to meet the expected applications from participating service providers in each rate center inventory pool.

5.2.2.3.4 Reports

The NANPA shall utilize aggregated thousands-block holder forecast data for each pool for consideration in NPA relief, NANP exhaust and NRUF reporting activities.

State regulatory authorities may request access to the thousands-block inventory pool and forecast data for the NPAs associated with their states.

5.2.2.3.5 Replenishment

The NANPA is responsible for monitoring each rate center pool and providing a mechanism for service providers to replenish and maintain a six (6)-month supply of assignable thousands-blocks (industry level inventory) in each rate center pool. The aggregate service provider forecasts submitted during each NRUF cycle shall be used initially to determine the appropriate level of inventory.

When the NANPA first realizes that the amount of inventory in each rate center pool may – in the future – fall below the projected six (6)-month forecast, the NANPA shall begin the replenishment process in accordance with the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6).

5.2.4.3 Thousands-Block Application Processing

The NANPA shall receive and verify applications for thousands-blocks in accordance with FCC directives and the INC guidelines. Thousands-block applications shall be transmittable through the NAS, for which access can be found on the NANPA's web site.

5.2.3.1 Thousands-Block Application Supporting Data

Service providers are required to furnish Months to Exhaust (MTE) worksheets with each growth application. The NANPA shall be responsible for assessing the thousands-block applicant's application to verify that it meets all requirements to have a thousands-block(s) assigned. At a minimum:

1. Thousands-block applicants shall be licensed or certified to operate in the rate center, and, if required, demonstrate that all applicable regulatory requirements have been met (e.g., facilities readiness criteria).
2. Thousands-block applicants shall submit a Months to Exhaust (MTE) worksheet for telephone numbers (TNs) with growth thousands-block applications.
3. Thousands-block applicants shall have on file a current Numbering Resource Utilization and Forecast (NRUF) Report for the associated requested rate center and/or NPA and a current pooling forecast with the NANPA.
4. Thousands-block applicants shall be confirmed by the NANPA that the service provider is in good standing and that no known ineligibility conditions exist (or are under investigation) in the pooling area in which the service provider is seeking resources prior to assigning resources to that service provider.
5. Authorized interconnected VoIP providers shall provide evidence of 30-day notification to the appropriate state commission.

5.2.3.2 Thousands-Block Applicant Treatment

The NANPA shall be responsible for ensuring that thousands-blocks are assigned in a fair and non-discriminatory manner. In addition, information requested from participating service providers shall be limited to that necessary for accurate and timely assignment and should be uniform for all thousands-block applicants.

The NANPA shall time-stamp all applications. All applications must be processed within seven (7) calendar days. If for any reason an application is suspended, the NANPA shall detail the reasons for such suspension and provide the procedure for escalation to clear the suspension.

5.2.3.3 Thousands-Block Application Response

The NANPA shall provide a confirmation in response to every thousands-block application received. Any system-generated emails associated with a NAS Tracking Number sent to service providers or thousands-block applicants shall clearly identify the rate center, state, specific NPA-NXX or NPA-NXX-X, type of response or request, status of the application (*i.e.*, approved, denied, suspended or withdrawn), and the Tracking Number in the subject line. However, if the response is denying, suspending or withdrawing a new CO Code request, no NPA-NXX shall appear in the subject line. The contents of the emails shall include sufficient information (*e.g.*, OCN, effective date, switching ID/POI) so that recipients can determine disposition of the email without logging into the system.

5.2.4 Communication/Notification Functions

The NANPA shall post daily on its web site the thousands-blocks assigned, retained and available in each rate center. This information shall be updated as changes occur (*i.e.*, information should be near real-time). Other means of distributing reports shall be available as necessary. The NANPA shall follow the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6) for notification of thousands-block assignments.

5.2.4.1 BIRRDs/LERG™ Routing Guide Notification

After the NANPA has made a thousands-block assignment, the NANPA shall enter the necessary thousands-block information through a mechanized interface into the iconectiv® BIRRDs, accurately and within the timeframes required in the INC guidelines. This will allow the service provider to build the necessary NXD-X block record(s) in BIRRDs for LErg™ Routing Guide update.

5.2.4.2 NPAC Notification

Consistent with the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6), the NANPA shall notify the NPAC via the mechanized interface of all block assignments and block returns/disconnects to ensure that the appropriate porting activity and industry notification occurs.

5.2.4.3 Problem Resolution Assistance

The NANPA shall use all records available to the NANPA to assist service providers and/or regulators in resolving customer complaints as the result of call completion failures, misrouting and/or service outages. Although proprietary data cannot be disclosed to other parties, the NANPA shall provide all other information and referral contacts to requesting parties within a timeframe that is agreed upon between the NANPA and the requesting party based upon the urgency of the failure. The NANPA may be asked to contact and/or provide proprietary information to the owner of the information if, for example, the only way to contact or view the proprietary information was by the NANPA contacting the party and asking them to call and/or cooperate with others who need information that they themselves can only provide for the purposes of resolving a failure.

5.2.5 Status Reporting

For thousands-block pooling administration, the NANPA shall monitor and report the status of all thousands-blocks in each rate center, including a total by status (*e.g.*, total available, total assigned or retained). These reports shall be generated and posted to the NANPA web site each business day.

5.2.6 Thousands-Block Reclamation

Consistent with the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6), the NANPA shall be responsible for initiating the reclamation process of assigned or abandoned

thousands-blocks where the assignee has not met the required criteria to retain the assigned or abandoned thousands-block.

The NANPA shall receive and process In Service confirmations from thousands-block assignees during the six-month period following the LERGTM Routing Guide effective date of the thousands-block specified on the response form. Receipt of an In Service confirmation from a thousands-block assignee certifies that the thousands-block has been placed in service. The NANPA shall maintain a tracking system for receipt of Part 4s. No further action is required of the thousands-block assignee once a Part 4 has been submitted.

Not later than one (1) month prior to the end of the six-month period, the NANPA shall send a reminder notice to thousands-block assignees if no Part 4 Form has received. The subject line of the reminder notice shall contain the following information: rate center abbreviation, state, NPA-NXX-X, Confirmation of Block Activation (Part 4) Reminder. The body of the reminder notice shall contain, at minimum, the following information: NPA-NXX-X, rate center abbreviation, state, switch CLLI, OCN, OCN name, Part 3 effective date and the Part 4 due date. The NANPA shall send a second notice to the service provider if no Part 4 is received within six (6) months of the original effective date for the thousands-block. The subject line of this second notice shall contain the following information: NPA-NXX-X, Overdue Part 4 Reminder, Tracking Number. The body of the reminder notice shall contain, at minimum, the following information: NPA-NXX-X, rate center abbreviation, state, switch CLLI, OCN, OCN name, Part 3 effective date and the Part 4 due date. This second notice also shall inform the service provider that it must submit the Part 4 to the appropriate regulatory authority.

If requested, the NANPA shall submit lists of service providers and their OCNs who are delinquent in the return of the Part 4 forms to state regulators monthly. If a block holder fails to submit a Part 4 within the timeframe specified by the FCC, the NANPA shall initiate the reclamation procedures, keeping accurate and complete records for each action taken. The NANPA shall obtain either state or FCC regulatory approval prior to reclaiming thousands-blocks.

The NANPA shall maintain a current point of contact list for thousands-block reclamation. Regulators and service providers are to be included on the list.

5.2.6.1 Criteria for Thousands-Blocks Reclamation

Specific criteria for block reclamation can be found in the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6).

5.2.6.2 Administrative Responsibilities for Thousands-Blocks Reclamation

At a minimum, the NANPA shall:

- Apply thousands-block reclamation criteria to any thousands-blocks subject to reclamation
- Clarify any alleged non-use or misuse of an assigned thousands-block
- Notify the service provider that a thousands-block is subject to reclamation
- If appropriate, notify and coordinate reclamation efforts with the appropriate regulatory bodies
- Notify the service provider when a thousands-block has been reclaimed using the Part 5 form in the *Thousands-Block Number (NXX-X) Pooling Administration Guidelines* (Reference 6), and that the thousands-block will be available shortly for reassignment
- Enter the thousands-block disconnect information into BIRRDs via the mechanized interface
- Notify the NPAC of the thousands-block disconnect through the mechanized interface

Section 6: Geographic p-ANI Administration

6.25 Requirements

The NANPA shall manage the p-ANI resources in accordance with federal regulatory requirements and the latest version of the published *p-ANI Administration Guidelines* (Reference 24). The NANPA shall perform the p-ANI administration that encompasses the following major functional categories:

- User¹⁸ Services
- Management of the p-ANI inventory pools
- Processing
- Problem Resolution
- Status Reporting
- Reclamation

When there are changes to the *p-ANI Administration Guidelines* (Reference 24) or there are regulatory directives, the NANPA shall institute a training program to educate its p-ANI administration staff in order to ensure consistent application. Training shall be completed within five (5) business days before the date the change to the guidelines becomes effective.

Within 90 days of contract award, the contractor shall provide to the COR a Change Management Plan for adapting the p-ANI assignment practices in accordance with updates and modifications to the *p-ANI Administration Guidelines* (Reference 24) and regulatory directives. The COR shall review the plan and request any necessary changes within 60 days, which the contractor will effectuate before implementation.

6.26 Functional Specifications

p-ANI administration activities include the key functional requirements detailed below.

6.26.36 User Services

The NANPA shall produce and make available information regarding p-ANI administration processes, guidelines, procedures, interfaces, and services.

Upon request, the NANPA shall provide information on how to obtain current documents or other information related to p-ANI administration. The NANPA may refer users to web sites where information can be located and downloaded. These documents or information currently include, but are not limited to:

- *p-ANI Administration Guidelines* (Reference 24)
- *NPA Code Relief Planning and Notification Guidelines* (Reference 19)
- Relevant ESIF, NENA, FCC licensing information and PSAP documentation.

The NANPA shall provide assistance to all entities who use Numbering Resources and suggest alternatives, when possible, that may assist users with Numbering Resource optimization and utilization issues. The NANPA shall assist p-ANI applicants with understanding and completing all forms and appendices associated with the *p-ANI Administration Guidelines* (Reference 24). The NANPA shall educate users. Such education may include, but is not limited to, providing job aides and providing necessary forms and instructions on the NANPA web site. The NANPA shall notify its users and interested parties when industry guidelines or applicable regulatory directives have changed. The NANPA shall provide electronic notification of administrative process and procedural changes within five

¹⁸ User represents p-ANI applicants, p-ANI assignees, regulatory agencies, 9-1-1 system service providers, and PSAPs.

(5) business days of the change being identified by the NANPA. Implementation of these changes shall include a transition period before the new process or procedure becomes effective.

6.2.2 Management of p-ANI Inventory Pool

The NANPA shall be responsible for all activities associated with the industry inventory p-ANI pool establishment, management and on-going maintenance. The NANPA shall monitor and manage the p-ANI inventory pool for each NPA. The aggregate p-ANI assignee forecast submitted during each Forecast Report cycle, is to be used initially to determine the appropriate level of inventory.

The NANPA shall maintain a current listing of NPAs selected for p-ANI implementation. Therefore the NAS shall be capable of implementing additional NPAs in relation to p-ANI inventory pools. Initially p-ANI assignments shall be made from the 211 and 511 NXX codes, but the NAS shall be capable of implementing additional NXXs as needed in relation to p-ANI inventory pools.¹⁹

P-ANIs shall be assigned from the p-ANI inventory of the requested NPA. The p-ANI inventory shall be from the non-dialable NPA-NXX codes designated for p-ANI purposes (e.g., 211 and 511). Each individual NPA is considered a separate pool of p-ANI numbers, even in cases where an NPA overlay situation exists, because of technical limitations (e.g., many selective routers can only support a maximum of four (4) NPAs). Initially the inventory pool shall be comprised of p-ANIs from the 211 and 511 NXX codes in each NPA, maintained in a single pool for that NPA.²⁰

6.2.2.1 p-ANI Inventory Pool Level

The quantity of p-ANIs that need to be maintained in the inventory pool should be determined using the following criteria:

- The NANPA's analysis of all p-ANI forecasts filed for each NPA inventory pool
- The NANPA's analysis of all p-ANI annual reports filed for each NPA inventory pool

The NANPA shall make every attempt to have a sufficient quantity of p-ANIs are available for assignment to satisfy demand.

6.2.2.2 Forecast and Utilization

Service providers and other p-ANI assignees participating in p-ANI administration are required to submit forecasted demand reports semi-annually to the NANPA, and utilization reports annually to the NANPA. The NANPA shall use this data and the criteria in Section 6.2.2.1 to ensure that there are sufficient p-ANIs available to meet the expected applications from participating p-ANI assignees in each NPA inventory pool.

6.2.2.3 Data Request Dates

The forecasted p-ANI data request shall be made to p-ANI assignees 30 days prior to the semi-annual Forecast Report due dates. The p-ANI annual report data request shall be made to p-ANI assignees 30 days prior to the Annual Report due date.

6.2.2.4 Forecast and Utilization Analysis

The NANPA shall use p-ANI assignee forecasts and utilization data and the criteria in Section 6.2.2.1 to size and manage each NPA's inventory pool. The NANPA also shall use this data to estimate the projected exhaust date for each NPA pool.

¹⁹ Additional NXXs may be designated in the future as needed.

²⁰ There is no technological or other distinction between the 211 and 511 NXXs, nor is there expected to be any for any other NXXs assigned in the future. As such, p-ANIs from designated NXXs will be interchangeably assigned to wireless and VoIP service providers.

6.2.2.5 Reports

Regulatory authorities may request access to p-ANI inventory pool and forecast data. The NANPA shall use the p-ANI assignee forecast and utilization data to produce and publish the p-ANI Activity and Projected Exhaust Report on the NANPA web site (See Section 6.2.5).

6.2.2.6 Replenishment

The NANPA is responsible for monitoring each NPA pool and replenishing the supply of assignable p-ANIs in each NPA inventory pool when needed. The aggregate p-ANI assignee forecast submitted during each Forecast Report cycle, is to be used initially to determine the appropriate level of inventory. When the NANPA determines that the amount of inventory in a given NPA pool may – in the future – fall below the projected 12-month forecast, the NANPA shall begin the replenishment process in accordance with the *p-ANI Administration Guidelines* (Reference 34).

6.2.3 p-ANI Application Processing

The NANPA shall receive and verify applications for p-ANIs in accordance with FCC directives and the INC guidelines. Applications for p-ANIs shall be transmittable through the NAS, for which access can be found on the NANPA's web site.

6.2.3.1 p-ANI Application Supporting Data

A p-ANI applicant is required to provide evidence that it is an Eligible User of p-ANI resources with each application, and verify the requested quantity of p-ANIs against any applicable ESIF Formula.²¹ The NANPA shall be responsible for assessing the p-ANI applicant's application to verify that it meets all requirements in order to have p-ANIs assigned. At a minimum:

1. p-ANI applicants shall meet the definition of an Eligible User.
2. p-ANI applicants shall have on file a current p-ANI Forecast Report with the NANPA (or provide the p-ANI Forecast Report to the NANPA prior to submitting its first application in the requested NPA).
3. p-ANI applicants shall provide a detailed explanation that documents the need for the requested quantity of p-ANIs in the comments field on the Part 1 application when making a request in excess of any applicable ESIF Formula²² or in excess of 50 p-ANIs if no formula applies. If the p-ANI applicant is requesting additional p-ANIs in a PSAP where it has existing p-ANI resources, then the applicant shall include those resources and the quantity that is being requested when determining if the request exceeds the applicable ESIF Formula or exceeds 50 p-ANIs when no formula applies.
4. p-ANI applicants shall have a current p-ANI Annual Report on file with the NANPA unless it is the p-ANI applicant's first request for any p-ANI resources.
5. p-ANI applicants shall be confirmed by the NANPA that the applicant is in good standing and that no known ineligibility conditions exist (or are under investigation) in the NPA in which the applicant is seeking resources prior to assigning resources to that applicant.

²¹ The ESIF Formula document (ATIS-0500018: p-ANI Allocation Tables for ESQs, ESRs, and ESRDs) can be obtained at <https://www.atis.org/docstore/default.aspx>.

²² The ESIF Formula document (ATIS-0500018: p-ANI Allocation Tables for ESQs, ESRs, and ESRDs) can be obtained at <https://www.atis.org/docstore/default.aspx>.

6.2.3.2 p-ANI Applicant Treatment

The NANPA shall be responsible for ensuring that p-ANIs are assigned in a fair and non-discriminatory manner. In addition, information requested from participating p-ANI applicants shall be limited to that necessary for accurate and timely assignment and should be uniform for all p-ANI applicants.

The NANPA shall time-stamp all applications. All applications must be processed within five (5) business days. If for any reason an application is suspended, the NANPA shall detail the reasons for such suspension and provide the procedure for escalation to clear the suspension.

6.2.3.3 p-ANI Application Response

The NANPA shall provide a confirmation in response to every p-ANI application received. Any system-generated emails associated with a NAS Tracking Number sent to p-ANI applicants shall clearly identify the state, NPA, specific p-ANI range, type of response or request, status of the application (*i.e.*, approved, denied, suspended or withdrawn), and the Tracking Number in the subject line. However, if the response is denying, suspending or withdrawing a new p-ANI request, no p-ANI range shall appear in the subject line. The contents of the emails shall include sufficient information (*e.g.*, OCN, assignment date, selective router CLLI, PSAP ID, PSAP name, PSAP county/municipality) so that recipients can determine disposition of the email without logging into the system.

6.2.4 Problem Resolution Assistance

The NANPA shall use all records available to the NANPA to assist service providers, p-ANI assignees and/or regulators in resolving customer or PSAP complaints. Although proprietary data cannot be disclosed to other parties, the NANPA shall provide all other information and referral contacts to requesting parties within a timeframe that is agreed upon between the NANPA and the requesting party based upon the urgency of the complaint. The NANPA may be asked to contact and/or provide proprietary information to the owner of the information if, for example, the only way to contact or view the proprietary information was by the NANPA contacting the party and asking them to call and/or cooperate with others who need information that they themselves can only provide for the purposes of resolving a complaint.

6.2.5 Status Reporting

The NANPA shall monitor monthly p-ANI activity for each NPA, and shall produce an annual p-ANI Activity and Projected Exhaust Report that includes, at minimum, the following information:

- national p-ANI utilization information
- p-ANI utilization by NPA
- the number of p-ANIs requested on a monthly basis
- the number of p-ANIs assigned on a monthly basis
- the number of p-ANIs returned on a monthly basis
- the number of p-ANIs modified on a monthly basis
- the number of p-ANI requests processed and the disposition of each
- forecast reports for projected future p-ANI resource usage

The annual p-ANI Activity and Projected Exhaust Report shall be provided to the INC and made available on the NANPA web site.

6.2.6 p-ANI Reclamation

Consistent with the *p-ANI Administration Guidelines* (Reference 34), the NANPA shall be responsible for initiating the reclamation process of assigned or abandoned p-ANIs where the assignee has not met the

required criteria to retain the assigned or abandoned p-ANI and as directed by the appropriate governmental agency.

6.2.6.1 Criteria for p-ANI Reclamation

Specific criteria for p-ANI reclamation can be found in the *p-ANI Administration Guidelines* (Reference 34).

6.2.6.2 Administrative Responsibilities for p-ANI Reclamation

At a minimum, the NANPA shall:

- Apply p-ANI reclamation criteria to any p-ANI subject to reclamation
- Clarify any alleged non-use or misuse of an assigned p-ANI
- Notify the p-ANI assignee that a p-ANI is subject to reclamation
- Notify and coordinate reclamation efforts with the appropriate governmental agency.
- Notify the p-ANI assignee when a p-ANI has been reclaimed

Section 7: Non-Geographic NPA 5XX-NXX Code Administration

7.27 Requirements

The NANPA shall manage the non-geographic NPA 5XX-NXX resource in accordance with federal regulatory requirements and the latest version of the published *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14). The NANPA shall perform the 5XX-NXX Code Administration that encompasses the following major functional categories:

- User²³ Services
- Processing
- Client and Internal Communication / Notification Functions
- Status Reporting
- Tracking 5XX-NXX Code Utilization for NPA relief

7.28 Functional Specifications

Non-Geographic 5XX-NXX Code administration activities include the key functional requirements detailed below.

7.28.37 User Services

The NANPA shall produce and make available information regarding 5XX-NXX Code Administration processes, guidelines, procedures, interfaces, and services. Upon request, the NANPA shall provide information on how to obtain current documents related to 5XX-NXX Code Administration. The NANPA may refer users to web sites where information can be located and downloaded. These documents currently include:

- *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14)
- *NPA Allocation Plan and Assignment Guidelines* (Reference 18)

The NANPA shall provide assistance to all entities who use Numbering Resources and suggest alternatives, when possible, that may assist users with Numbering Resource optimization and utilization issues. The NANPA shall assist 5XX-NXX code applicants with understanding and completing all forms and appendices associated with the *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14). The NANPA shall educate users. Such education may include, but is not limited to, providing job aides and providing necessary forms and instructions on the NANPA web site. The NANPA shall notify its users and interested parties when industry guidelines or applicable regulatory directives have changed. The NANPA shall provide electronic notification of administrative process and procedural changes within five (5) business days of the change being identified by the NANPA. Implementation of these changes shall include a transition period before the new process or procedure becomes effective.

The NANPA shall respond to inquiries regarding available and assigned 5XX-NXX Codes. Such response may consist of referring the user to a specific page on the NANPA web site.

7.28.38 Processing

The NANPA shall receive and verify applications (Part A) for 5XX-NXX Codes in accordance with FCC directives and the *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14). The NANPA shall provide an email confirmation (Part B) in response to every 5XX-NXX Code application received with sufficient detail in the subject line and the body of the email to clearly identify the application (*i.e.*, the Tracking ID), type of response, and 5XX-NXX codes assigned or returned. Such responses shall also be downloadable from the NAS.

²³ User represents code applicants, code holders, regulatory agencies, and the general public.

As 5XX-NXX Code Administrator, the NANPA shall be aware of and adhere to any limits on code assignments as ordered by the FCC or agreed to by industry. The NANPA shall also provide a list of 5XX-NXX codes that are unavailable for assignment (e.g., 5XX-N11 codes).

7.28.39 Communication/Notification Functions

The NANPA shall post daily on its web site the 5XX-NXX assigned, available and unavailable in each 5XX NPA. This information shall be updated as changes occur. Other means of distributing reports shall be available as necessary. The NANPA shall follow the *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14) for notification of 5XX-NXX Code assignments. The NANPA shall notify iconectiv® of each 5XX-NXX assignment and return so that iconectiv® can input the information in BIRRDS. The NANPA shall issue notification of all 5XX-NXX Code administration activities to the appropriate regulatory agencies and the affected industry members.

7.28.40 Status Reporting

For 5XX-NXX Code Administration, the NANPA shall monitor and report the status of NXXs in each 5XX NPA, including a total by status (e.g., total available, total unavailable and total assigned NXXs). These reports shall be generated and posted to the NANPA web site each business day.

7.28.41 Tracking 5XX-NXX Code Utilization for NPA Relief

The NANPA shall fulfill the process responsibilities in accordance with the *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14) and regulatory directives, including the following:

- Forecasting the need for additional 5XX NPAs by continually monitoring 5XX-NXX code growth and projecting exhaust.
- Upon the identification of a potential exhaust situation, notify appropriate regulatory authorities and affected parties.

7.29 Management of the 5XX-NXX Code Inventory

The NANPA shall track and monitor MTE, forecast, and utilization reports so that it shall be able to forecast demand and anticipate the need for relief of the 5XX NPA resource (i.e., open a new 5XX NPA for assignments).

7.30 5XX-NXX Code Reclamation

NANPA shall initiate the reclamation of 5XX-NXX resources assigned to service providers that fail to meet the terms specified in the *Non-Geographic 5XX-NXX Code Assignment Guidelines* (Reference 14). The NANPA shall receive and process Part C confirmations from 5XX-NXX code holders during the six-month period following the published assignment date of the code. Receipt of a Part C from a code holder certifies that the 5XX-NXX code has been placed in service. The NANPA shall maintain a tracking system for receipt of Part Cs. No further action is required of the 5XX-NXX code holder once a Part C has been submitted.

Not later than one month prior to the end of the six-month period, the NANPA shall send a reminder notice to 5XX-NXX code holders if no Part C Form has been received for the code assigned. The subject line of the reminder notice shall contain the following information: 5XX-NXX, Confirmation of Code Activation (Required) – Part C, Tracking Number. The body of the reminder notice shall contain, at minimum, the following information: NPA-NXX, OCN, OCN name, 5XX-NXX assignment date and the Part C due date. The NANPA shall send a second notice to the service provider if no Part C is received within six (6) months of the 5XX-NXX assignment date on the Part B. The subject line of this second notice shall contain the following information: 5XX-NXX, Part C Delinquent Notice, Tracking Number. The body of the second notice shall contain, at minimum, the following information: 5XX-NXX, OCN,

OCN name, 5XX-NXX assignment date and the Part C due date. This second notice will inform the service provider that it must submit the Part C to the appropriate regulatory authority (*i.e.*, the FCC). If a code holder fails to submit a Part C within the timeframe specified by the regulatory authority, the NANPA shall initiate the reclamation procedures, keeping accurate and complete records for each action taken. The NANPA shall obtain regulatory approval prior to reclaiming codes.

The NANPA shall maintain a current point of contact list for 5XX-NXX code reclamation. Regulators and service providers are to be included on the list. In addition, a contact list for all other NANP members shall be maintained, if necessary.

Section 8: NPA Relief Planning

The NANPA shall perform the area code (NPA) relief functions specified in the *NPA Code Relief Planning and Notification Guidelines* (Reference 19) and 47 CFR §52.13. The NANPA shall be prepared to work with state regulatory authorities, which may choose to assume any of these responsibilities pursuant to FCC orders. The NANPA, in order to effectively perform its NPA relief functions, shall maintain considerable knowledge of local/regional environments, including geography, demographics, and communities of interest, as well as growth patterns, local dialing plans, and operating/certified service providers. The NANPA shall determine NPAs in need of relief and appropriately manage the relief efforts through the implementation of a new area code.

The NANPA shall notify all affected CO code and block holders with regard to an NPA in need of relief, and any associated meeting information. In addition to notification, the NANPA shall post in NAS the Initial Planning Documents (IPD) a minimum of four (4) weeks before any scheduled NPA relief-planning meeting and the NANPA shall facilitate the meeting. An IPD and relief planning meeting will not be required where NPA Relief is required for an existing overlay complex or where NPA Relief is required for a single NPA area and only an overlay alternative will meet the requirements in the Guidelines. The NANPA shall post in NAS all NPA relief meeting announcements and preliminary planning information, and distribute a notice to affected industry members that such information has been posted. Accordingly, the NANPA shall continue to update the local/regional information and contact information to meet the level of NPA relief expected in any given year during its Term of Administration.

8.31 Key Responsibilities

Key NANPA NPA relief responsibilities consist of the items listed below.

8.31.42 Relief Timing

The NANPA shall determine the need for and identify the timing of NPA Relief in accordance with the *Central Office Code (NXX) Assignment Guidelines* (Reference 8) and the *NPA Code Relief Planning and Notification Guidelines* (Reference 19). Tools for performing this task include NRUF Report data and the semi-annual NPA Exhaust Forecast Report.

8.31.43 Relief Planning Communication

The NANPA shall promptly communicate with all affected industry members and appropriate state regulatory authorities to advise them of the need for relief planning to occur.

8.31.44 Initial Planning Document (IPD) Preparation and Distribution

The NANPA shall prepare and distribute to industry members and state regulatory authorities an IPD for each NPA projected to exhaust within the next 36 months, as identified in the NRUF Report (*i.e.*, NPA Exhaust Forecast Report). The IPD shall describe and assess possible relief options and include detailed historical information regarding prior years' forecasts versus the actual assignment of codes. The NANPA shall include detailed historical information on the assignment of blocks and pooled codes, and forecasted block and code demand for the pool. NANPA shall include the pooling information in the IPD so that the industry has sufficient information to make a decision on the method of relief to recommend to the state regulatory authority.

8.1.4 Relief Planning Meetings

The NANPA shall schedule initial NPA relief planning meeting(s) per the *NPA Code Relief Planning and Notification Guidelines* (Reference 19). This meeting shall be 36 months in advance of the projected NPA exhaust date to permit the timely planning and implementation of NPA relief.

8.31.45 Relief Planning Report

The NANPA shall provide a report to the NANC, once per quarter, on its success or failure in meeting this Performance Measurement.

8.31.46 Relief Planning Consensus Building

The NANPA shall notify interested industry and state regulatory authorities of NPA relief planning meeting(s) and conduct the meeting(s) with the objective of gaining consensus on a relief plan.

8.31.47 Neutral Facilitator Role

The NANPA shall act as neutral facilitator (*e.g.*, issuing meeting announcements, coordinating meeting arrangements, setting an agenda, providing a conference bridge and web conferencing capabilities, leading the meeting, issuing meeting minutes, and performing other duties necessary to conduct the meeting) for all relief planning meeting(s).

8.31.48 Proactive Role in Relief Planning

The NANPA shall ensure state regulatory authorities have appropriate information necessary to endorse industry-consensus relief plans or develop their own plan if they desire. The NANPA shall proactively work with the state regulatory authorities to achieve endorsement of a relief plan no later than 18 months prior to the projected exhaust of the NPA to allow the industry appropriate time for implementation and to ensure relief is implemented at least 6 months prior to the projected exhaust of the NPA.

8.31.49 Status Reporting on Relief Plans

The NANPA shall track and report on the status of pending relief plans to the FCC and the NANC each month. The NANPA shall track and report on the status of pending relief plans each business day by posting the report on its web site.

8.31.50 Possible Testimony

The NANPA may be requested to provide testimony to the state regulatory authorities regarding the relief plan, as necessary. This service shall be treated as an Enterprise Service (see Section 15).

8.1.51 New NPA Code Assignment

The NANPA shall assign a new NPA code(s) in accordance with the *NPA Code Relief Planning and Notification Guidelines* (Reference 19) and the approved relief plan.

8.1.52 Implementation Scheduling

The NANPA shall schedule and facilitate the first implementation meeting once a form of relief has been selected and ordered by a state regulatory authority, in accordance with the *NPA Code Relief Planning and Notification Guidelines* (Reference 19).

8.31.53 Industry Scheduling and Notification

The NANPA shall provide industry notification of NPA code relief implementation activities via a Planning Letter and information posted to the NANPA web site. For example, the NANPA shall provide adequate advanced notice, public announcements, test number and testing period, new boundary maps, new dialing procedures, the relief date, permissive dialing period, mandatory dialing date, and ANI records conversion dates (if applicable). Further, the NANPA shall provide information for any applicable databases updates, including but not limited to the Line Information Database (LIDB), the BIRRDs database, the LERGTM Routing Guide, LIDB Access Routing Guide (LARG), etc. The NANPA shall also provide notifications of any subsequent changes made by state commissions to relief dates, permissive dialing periods, or mandatory dialing dates.

8.1.54 Press Release

The NANPA shall, with the input and approval of the state regulatory authorities and industry, prepare and issue a press release to inform the public of the approved Relief Plan and respond to requests from the media and public for information. If the state regulatory authority chooses to issue such a press release instead, the NANPA may forgo issuing its own press release.

8.1.55 Implementation Assistance

The NANPA shall assist any industry-led NPA Relief implementation committees, such as assisting with distribution of initial meeting notices and providing a high resolution map in the format and granularity needed for the industry's customer notifications. The NANPA shall assist the Toll-Free Number Administrator, as necessary, with modifications to the toll-free database.

If necessary, the NANPA shall declare an NPA code in jeopardy based upon the INC definition of a jeopardy situation and implement interim jeopardy procedures (e.g., an NXX code-rationing plan) until final jeopardy procedures are agreed to by the industry. If there is no industry consensus on final jeopardy procedures, the NANPA shall implement a state approved rationing plan after the state regulatory authority orders NPA relief. After a state regulatory authority orders a specific form of area code relief and has established an implementation date, the NANPA shall adopt and implement that plan as ordered by the state regulatory authority, unless the ordered plan does not meet the criteria for assignment outlined in the *NPA Code Relief Planning and Notification Guidelines* (Reference 19). In that case, the NANPA shall suspend assignment of the new NPA pending FCC direction.

8.1.16 Compliance

The NANPA shall:

- Comply with the *Central Office Code (NXX) Assignment Guidelines* (Reference 8), the *NPA Allocation Plan and Assignment Guidelines* (Reference 18), and the *NPA Code Relief Planning and Notification Guidelines* (Reference 19).
- Implement a planned approach using effective forecasting and management tools and skills in order to ensure the availability of Numbering Resources.
- Facilitate the timely planning and implementation of NPA relief.
- Proactively work with state regulatory authorities to achieve selection of a relief plan by the requested date or 18 months prior to exhaust, whichever is later, to allow the industry appropriate time for implementation.

If a relief plan has not been approved by 90 days prior to industry requested approval date, or at least 18 months prior to exhaust, then the NANPA shall notify the state commission in writing of the date the relief plan approval was requested or that the NPA is projected to exhaust within the next 18 months, with a copy of which shall be sent to the NANC Chair.

If the state regulatory authority has not ordered an NPA relief plan on or before the industry requested approval date or at least 18 months prior to exhaust, then the NANPA shall notify the FCC and the NANC in writing and provide the date by which an order is required to avoid jeopardizing the timely implementation of NPA relief.

8.2 User Notification

The NANPA shall maintain an electronic document distribution and notification system (i.e., NNS), which NANPA's NPA relief planners shall use to notify affected users of the need for an NPA relief meeting and to keep all users informed of all NPA-relief related postings in NAS (e.g., IPDs, meeting notices), final relief plans and implementation processes. The document notification system shall also be

used to distribute additional details and data deemed necessary to keep clients informed of the status of any relief activity that has experienced a delay in implementation.

Section 9: Utilization and Forecasting

The NRUF Report is filed semi-annually by service providers in accordance with FCC orders and regulations and the *NANP Numbering Resource Utilization/Forecast (NRUF) Reporting Guidelines* (Reference 7). Each service provider assigned geographic CO codes and/or thousands-blocks or assigned non-geographic 5XX-NXX or 900-NXX codes shall complete the appropriate geographic or non-geographic NRUF Report and submit it to the NANPA by February 1st and August 1st of each year.

The NANPA shall compile, examine, and analyze the data gathered from these reports and submit its analysis to the NANC, the FCC and state regulatory commissions that have requested it, semi-annually by the last business day of April and October of each year, unless otherwise directed by the FCC.

9.32 Responsibilities

The following is a list of the functional areas that fall within the NANPA's data collection, processing and NRUF reporting responsibilities:

9.32.56 Point of Contact

The NANPA shall be the point of contact for collecting NRUF forecast and utilization data. Forms shall be submitted electronically, via NAS, spreadsheet attachment to email, FTP, or RESTful API. The NANPA shall assist carriers in completing the NRUF forms by clarifying the service provider requirements to report and correctly understand the NRUF process.

9.32.57 Contact List Maintenance

The NANPA shall maintain a list of the individual(s) within each reporting entity identified on the last NRUF report submitted by that entity as the contact person(s). The NANPA shall periodically remind reporting entities in writing of the need to keep the list of contacts current and accurate.

9.1.3 Data Requests

The NANPA shall request the NRUF data from all service providers within the U.S. Such data shall be requested for submission by February 1st and August 1st of each year. All NRUF data shall be aggregated from within the same timeframe. Data from U.S. service providers shall be processed separately, and then aggregated with all other reported data to obtain a complete picture of the status of the NANP. Canada and other NANP nations will provide exhaust projections for their NPAs to the NANPA.

9.32.58 Data Requests in Pooled Areas

In pooled rate centers within an NPA, the NANPA shall receive forecast data in thousands-block increments, by month, from service providers in the same timeframe as the NRUF requirements. The NANPA shall aggregate this forecast data and incorporate it into its data analysis.

9.32.59 Data Analysis

The NANPA shall compile, examine and analyze all the data obtained from the semi-annual NRUF Reports and the forecast data in thousands-block increments, by month. The results of this analysis shall be made available by the NANPA by the last business day of April and October of each year. The NANPA shall compare actual NPA exhaust and current exhaust forecasts with the past five (5) exhaust projections. The NANPA shall summarize the accuracy of its forecast outlining: (1) contributing factors, (2) changes required, (3) the outcome if no change is made, (4) the parties who shall participate in the change and (5) a description of the activity each party shall take to realize the desired outcome.

9.1.60 Data Reporting

The NANPA shall produce a semi-annual report(s) that summarizes the projections of exhaust of each NPA and the NANP as a whole.²⁴ The geographic NPAs report shall at a minimum, be similar in format and content to the *NANP and NPA Exhaust Analysis* report provided to the NANC and posted on the NANPA web site. The NANPA shall highlight significant anomalies, for example, those NPAs with projected exhaust date changes of more than six (6) months from one report to another, and provide a brief explanation for the change.

9.1.61 User Support

The NANPA shall be available to its users to answer questions pertaining to any aspect of the NRUF Report process (*e.g.*, forms, instructions, analysis, data assumptions, etc.). The NANPA shall also distribute periodic tips to NRUF Reporting service providers, to assist them in avoiding common errors.

9.32.62 Data Aggregation

The NANPA shall also compile, examine, and analyze the forecast and utilization data submitted by reporting service providers between reporting periods. If it appears that the life of an NPA or the NANP shall be significantly affected by an updated NRUF Report submitted by a service provider(s), the NANPA shall report those results within 30 days of receiving the data submissions from the service provider(s) to the appropriate regulatory authority and post the updated exhaust projection on the web site.

In the event that NANP exhaust is affected by an updated NRUF submission, the NANPA shall send the results to the appropriate regulatory authority in NANP member countries and the NANC. In cases that only involve NPA exhaust, the NANPA shall forward the results to the appropriate regulatory authority.

9.32.63 Request to Review Data

At the request of a U.S. state regulatory authority and upon receipt by the NANPA of a written statement that the state regulatory authority has the appropriate confidentiality procedures in place to protect the data, the NANPA shall, within ten (10) business days, provide a single report containing disaggregated data to any requesting state that is reported by service providers in that state, so long as the request is made 30 days after the deadline for NRUF reporting and before the subsequent NRUF reporting deadline. Regulators also shall have access to the NRUF data for the NPAs in their respective states via NAS.

The NANPA shall provide reports to state regulatory authorities per their initial request and delivery schedule. State regulatory authorities shall provide the NANPA with requested delivery schedule changes and report content changes at least 30 days prior to the effective date of the change. Requests of this nature shall be provided without an additional charge to the state regulatory authority.

9.64 Penalties for Non-Submission

If an NRUF Report has not been submitted by a service provider, the NANPA shall withhold future numbering assignments from that service provider within the NPA for which the NRUF data has not been supplied. Once the NRUF data has been submitted, the NANPA shall process any assignment request.

9.1.65 Report Anomalies

If the NANPA identifies any significant inconsistencies or anomalies in a service provider's data (*e.g.*, missing utilization on assigned central office codes or thousands-blocks), the NANPA shall inform the submitting service provider of its findings, provide the specific data relevant to document the significant

²⁴ NANPA may choose to publish the exhaust of the non-geographic 5XX NPAs separately, but such data shall be incorporated into the calculation for the NANP exhaust as a whole.

inconsistency or anomaly in the service provider report, and request a review and confirmation (written or oral) from the service provider. The NANPA shall allow the service provider five (5) business days to provide that confirmation, or to resubmit the data. If, after the discussions with the service provider, the NANPA still believes that a U.S. telecommunications service provider's data contains inconsistencies or anomalies, then the NANPA shall report its findings to the appropriate regulatory bodies (e.g., state regulatory authority, the FCC). The NANPA shall assign no additional numbering resources to such service providers until the appropriate state regulatory authority instructs it to do so. Where the state regulatory authority has chosen not to exercise this delegated authority, the NANPA shall seek instruction from the FCC.

9.2 Development of Tests for Anomalies and Inconsistencies

The NANPA shall examine the NRUF report submitted by each service provider for inconsistencies or anomalies. The NANPA shall design the tests and algorithms that it shall use to test the utilization and forecast data submitted by service providers prior to actually performing any tests. The NANPA shall provide a detailed description of the actual methodology employed to identify inconsistencies and anomalies. The description shall include a list of all assumptions and rationales incorporated into the methodology tests, as well as any mathematical formulas that are used.

The NANPA also shall work with the NANC to form criteria for determining what types of submissions shall be deemed inconsistent or anomalous. It is expected that the NANPA shall continually refine this process and remain mindful of the changing telecommunications landscape to ensure that its methods and assumptions are current and valid.

9.33 NANPA Analysis of Data

The NANPA shall accumulate and analyze forecast and utilization data from each service provider according to the schedule detailed in the FCC 00-104 (Reference 1). The NANPA shall use this information along with historical and other data possessed by the NANPA to create a forecast that is as accurate as possible.

9.3.66 Methodology for Projecting NPA Exhaust

The NANPA shall project the potential exhaust of NPA codes. Although the NRUF data shall be the primary source of information for any analysis, the NANPA shall incorporate other relevant data elements into its analysis in determining the projected exhaust time frame of each NPA. Some of the additional data elements to be incorporated where relevant are noted below.

9.3.66.1 NRUF Survey Responses

Once the tests for inconsistencies and anomalies have been performed and the responses deemed acceptable by the NANPA, these responses shall be the primary input to any analysis of NANP and NPA exhaust.

9.3.66.2 Historical CO Code Assignment Data

The historical CO Code data includes NXX code assignments over at least the two (2) years immediately preceding the date of the NRUF for all industry segments, e.g., Incumbent Local Exchange Carrier (ILEC), Competitive Local Exchange Carrier (CLEC), two-way Commercial Mobile Radio Service (CMRS) Carrier, Paging Carrier, and Interconnected VoIP Provider.

9.33.66.3 CO Code Rationing

After jeopardy has been declared, the rationed amount shall have a significant and direct effect on the life of the NPA, regardless of forecasted demand. In such cases, all other elements may be rendered irrelevant.

9.33.66.4 CO Code Assignments as of the Data Collection Date

A single recent event can affect the life span of an NPA, and thus CO code assignments as of the data collection date should be factored into the exhaust projections.

9.33.66.5 Total Number of Codes Available for Assignment

If relief has been applied since the last reporting period, the environment will have changed and the analysis must reflect the change.

9.33.66.6 Rate Centers Per NPA

The effects of any rate center consolidation or split within an NPA may have a significant impact on CO Code demand.

9.33.66.7 Expanded Local Calling Areas

The inclusion of additional carriers in expanded local calling areas may also have an impact on CO Code demand.

9.33.66.8 Thousands-Block Pooling

The impact of thousands-block number pooling on CO Code demand, where it has been implemented, must also be taken into account.

9.33.67 Minimum Analysis Requirements

Prior to performing the analysis, the NANPA shall provide to the NANC a detailed description of the actual methodology employed. The description shall include a list of all assumptions and rationales incorporated into the methodology, as well as any mathematical formulas that are used.

The NANC shall have the opportunity to provide advice and consent to the analysis methods and assumptions the NANPA uses to perform its analysis of the NRUF results. Continuous methodology refinement is expected and encouraged. At a minimum, the analysis shall begin with a determination of the quantity of available NXXs within each NPA.

Using the aggregated service provider forecasts and the tests developed by the NANPA to identify inconsistencies and anomalies, the NANPA shall determine the quarterly NXX demand for each NPA. The actual adjustments applied shall be consistent with, and fully explained in, the NANPA's description of assumptions and rationales.

9.3.3 Anomalies and Trends

The NANPA shall identify anomalies and trends in numbering usage for all NANP resources. The NANPA shall assist users in assessing the results shown and the action required to achieve numbering optimization goals. On an annual basis, the NANPA shall provide a report to the FCC reporting any anomalies and trends affecting the NANP.

9.34 Numbering Resource Utilization and Forecasting (NRUF) Report Submissions

U.S. service providers are required to submit NRUF data electronically. The NANPA shall support five (5) electronic methods for NRUF submission data collection: electronic file transfer (EFT) or FTP,

RESTful API, spreadsheet attachment to e-mail, online entry into the NAS, or spreadsheet on other electronic format (*e.g.*, flash drive).

Section 10: NANP Administration System (NAS) Requirements

This section describes key capabilities, which are required minimum capabilities, of the NANP Administration System (NAS), which also includes functionality to support thousands-blocks and p-ANI administration. At a minimum, the newly developed system shall encompass all existing functionality of the current NAS, Pooling Administration System (PAS) and the Routing Numbering Administration System (RNAS). The system shall provide NANPA employees and clients' access to all necessary information required for NANP Numbering Resource management. The NANPA shall maintain the NAS to ensure that the system is capable of supporting the requirements and functionality acknowledged within this document. In addition, the NAS shall have sufficient capacity to support current and future resources and users.

This system shall include appropriate security measures for maintaining confidential data and provide accessibility for all users to their own information through an appropriately secured mechanism. In addition, a user class shall be maintained that allows specific users (*e.g.*, state regulatory authorities, PSAPs) to access selected, appropriate geographic data submitted by other users. These security measures shall be described in the NANPA's Security Plan.

Service provider and assignee/applicant specific data submitted to the NANPA shall be treated as confidential. Any data published by the NANPA shall be aggregated for presentation.

10.35 System Characteristics

The NAS shall utilize standard electronic commerce type functionality that allows efficient user interaction and data file transfer. Data file transfer shall be simple and easy to understand.

10.35.68 System Availability

The NAS shall possess high reliability and allow for economical and efficient system expansion as needed. The NAS shall be seamlessly available for input, processing, and downloads during users' normal business hours. The NAS shall, at a minimum, adhere to the following availability and reliability requirements:

- Available 24 hours, seven (7) days a week
- Availability shall meet a minimum requirement of 99.9% of scheduled up-time
- Unscheduled maintenance downtime per calendar year interval shall be less than nine (9) hours
- The mean time to repair (MTTR) for all unscheduled downtime per any 12-month interval shall be less than one (1) hour during core business hours and four (4) hours for non-core business hours
- Scheduled maintenance downtime per 12-month interval shall be less than 24 hours.

Scheduled maintenance shall occur outside of normal business hours and users shall be notified by e-mail and/or other electronic notice (*e.g.*, NNS notification) no less than 30 days in advance of any scheduled event. Such notifications shall also be posted to the NANPA website, and shall provide sufficient detail such that users can determine how such maintenance may impact them (*e.g.*, changes that may affect users' FTP or RESTful API processes).

The NAS design shall, at a minimum:

- Use an FCC-approved web services provider
- Support system fault tolerance that shall be transparent to users
- Support a system architecture that enables continuous operation in the event of system failure including loss of AC power up to eight (8) hours

- Support a system architecture that has the ability to identify when the quantity of simultaneous queries exceeds a specified threshold and can temporarily limit the queries so that no user's experience is negatively impacted.

If the NAS becomes unavailable for normal operations due to any reason, including both scheduled and nonscheduled maintenance, users and regulatory agencies shall be notified of the NAS unavailability within five (5) minutes of the outage. Whenever possible, the notification shall be made by e-mail and/or other electronic notice (e.g., NNS notification). When this is not possible, the NANPA shall notify users and regulatory agencies via web site notification. When the NAS is restored to normal operations, users and regulatory agencies shall be notified of the NAS's availability via electronic broadcast message (e.g., NNS notification) within five (5) minutes of NAS restoration. Notices shall be auditable.

10.35.69 System Query Capability

For the purpose of this document, a query is defined as the ability to request and retrieve data stored in the system. The system shall:

- Support users' needs to retrieve their data through a query capability.
- Support users' needs to retrieve public data through a query capability. For example, a search by NPA shall provide information about the NPA such as whether it is assigned, how it is used, state information, the in service date, associated Planning Letters with hyperlinks to the Planning Letters, the associated dialing plan, overlay status, parent NPA information, time zone, whether relief planning is in progress, and jeopardy status.
- Support a user authorization level that identifies the range and scope of the data access of each user, including identification notice of approved access to their data by other users.
- Be capable of querying and retrieving one or multiple records using any stored data fields.

10.1.3 System Scalability

The NAS shall continue to be expandable and flexible so that it can easily expand its capacity and number of users, such as, but not limited to, through:

- Addition of new NPAs
- Addition of new rate centers
- Additional users
- Addition of new Numbering Resource and data elements
- Expansion of the NANP
- Electronic application, request and document tracking

10.1.4 NAS Characteristics

NAS shall have the following characteristics:

- Use of Infrastructure As A Service (IAAS), which enables NANPA to create code to automate routine maintenance tasks, quickly rebuild virtual servers in the event of a failure, and automatically deploy new builds
- A high level of scalability, lowering the need for infrastructure that accommodates peak usage at all times
- Component isolation, so that an issue with one component will not affect others
- Automation functionality
- Allow secure and efficient user interaction and file transfer